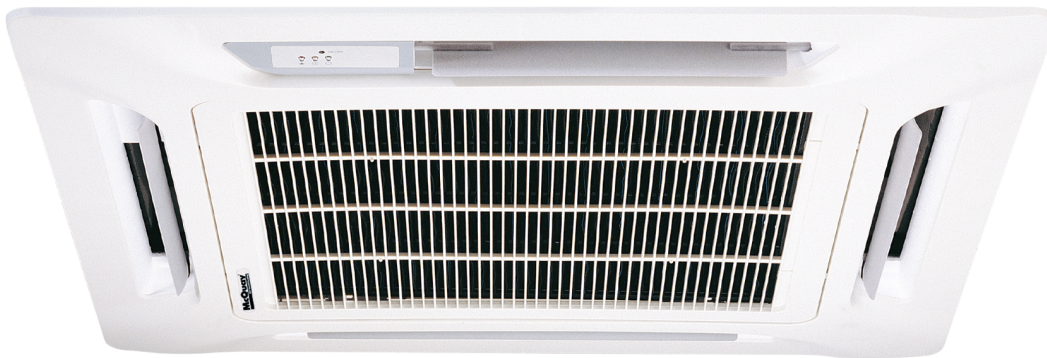


## Ceiling Cassette Split Systems

Models: MCK 020A/AR      MCK 015B/BR  
MCK 025A/AR      MCK 020B/BR  
MCK 030A/AR      MCK 025B/BR  
MCK 040A/AR      MCK 030B/BR  
MCK 050A/AR      MCK 010C/CR  
MCK 015C/CR  
MCK 020C/CR



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**Note:** Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations, and experienced with this type of equipment,

**Caution:** Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

**Warning:** Moving machinery and electrical power hazards. May cause severe personal injury or death. Disconnect and lock off power before servicing equipment.

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# Special Features

## Ultra Slim New Stylish Design Profile

This unit is contemporary in design and match even the most up to date interior decor. The slim, (only 20 mm for C-series, only 22 mm for B-series and only 28 mm for A-series) and round profile front panel of this unit adds a touch of elegance to every decor.

## Turbo Mixed Flow Fan

Innovative design of highly efficient turbo fan produces an even air circulation in all direction.

## Built-In High Head Drain Pump

The unit has a built-in high head drain pump (with 700 mm drain head) to provide and ensure smoothness drainage of condensate water.

## Strong and Robust

The unit is built from strong casing material and robust parts to ensure long lasting reliable service. The drain pan is made from the POLYSTYRENE with a plastic coating on the surface to ensure no leaking and condensation occur.

## Friendly Serviceability

The air filter, electrical parts, fan, fan motor and drain pump can all be inspected and replaced from the bottom of the unit by simply removing the air intake grille. The POLYSTYRENE drain pan and the heat exchanger coils can be removed from the unit easily by removing the front panel.

## Microcomputer Remote Controller

The incorporated microprocessor offers more accurate control and with the following extra features:

- Fan motor speed can be set at high/medium/low or automatic.
- Timer on/off - the unit can be pre-set to switch on and off automatically.
- Electronic thermostat - room temperature is precisely controlled, resulting in energy saving and increase comfort.

## Wireless Remote Controller

The compact wireless remote controller makes it possible to operate the air conditioner anywhere within the room.

# Specifications

## CEILING CASSETTE A SERIES (COOLING ONLY)

MODEL			INDOOR UNIT		MCK020A		MCK025A		MCK030A		MCK040A		MCK050A													
			OUTDOOR UNIT		MLC020B		MLC025B		MLC030B		MLC030C		MLC035C		MLC040C		MLC050C									
NOMINAL COOLING CAPACITY					kcal/h		5290		6300		6800		7560		8320		10080		12600							
					W		6150		7330		7910		8790		9670		11720		14650							
					Btu/h		21000		25000		27000		30000		33000		40000		50000							
NOMINAL TOTAL POWER - 1Ø [ 3Ø ]					W (50Hz)		2340 [ 2210 ]		2990 [ 2840 ]		3120		2980 [ 3460 ]		3390		[ 3920 ]		[ 5190 ]							
					W (60Hz)		2210		2960		-		3880		-		[ 4610 ]		[ 5860 ]							
NOMINAL TOTAL CURRENT - 1Ø [ 3Ø ]					A (50Hz)		11.1 [ 4.1 ]		15.0 [ 5.2 ]		15.8		14.4 [ 5.8 ]		16.7		[ 5.8 ]		[ 7.9 ]							
					A (60Hz)		10.1		13.8		-		18.5		-		[ 12.6 ]		[ 15.4 ]							
			POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50 , 208 - 230 / 1 / 60																			
			REFRIGERANT / CONTROL		R22 / CAPILLARY TUBE IN OUTDOOR				R22 / CAPILLARY TUBE IN INDOOR																	
FAN			AIR FLOW		cfm / L/s		770 / 363				810 / 382				920 / 434				1030 / 486				1080 / 510			
			FAN MOTOR		50 Hz		6 POLES x 35W				6 POLES x 45W				6 POLES x 60W				6 POLES x 83W				6 POLES x 120W			
					60 Hz		6 POLES x 29W				6 POLES x 45W				6 POLES x 60W				6 POLES x 147W				6 POLES x 169W			
			RATED INPUT POWER (W)		50 Hz		127				151				164				192				253			
			60 Hz		137				160				198				308				329					
COIL			RATED RUNNING CURRENT (A)		50 Hz		0.53				0.65				0.69				0.80				1.08			
					60 Hz		0.62				0.73				0.93				1.42				1.50			
			MATERIAL		S.B.C.														S.I.G.C.							
			DIAMETER		mm/in		9.52 / 3/8														7.0 / 0.28					
			THICKNESS		mm/in		0.35 / 0.014														0.27 / 0.01					
FIN			MATERIAL		ALUMINIUM														ALUMINIUM (HYDROPHILIC TYPE)							
			THICKNESS		mm/in		0.11 / 0.0043																			
			ROW				2		2		2		3													
			FIN PER INCH				12		14		16		20		20											
			FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.469 / 5.022														0.56 / 6.03					
DIMENSION ( ) - WITH PANEL			HEIGHT		mm/in		335 (363) / 13.2 (14.3)																			
			WIDTH		mm/in		820 (930) / 32.2 (36.6)																			
			DEPTH		mm/in		820 (930) / 32.2 (36.6)																			
WEIGHT (UNIT + PANEL)			kg		31 + 4		32 + 4		35 + 4		38 + 4		40 + 4													
SOUND PRESSURE LEVEL ( H / M / L )			dBA		42 / 39 / 37		45 / 42 / 40		49 / 45 / 43		51 / 48 / 46		53 / 52 / 50													
CONTROL			ROOM TEMPERATURE		MICROCOMPUTER CONTROLLED THERMOSTAT																					
			AIR DISCHARGE OPERATION		4-WAY AUTOMATIC LOUVER ( UP & DOWN ) LCD WIRELESS MICROCOMPUTER REMOTE CONTROL / LED WIRED MICROCOMPUTER REMOTE CONTROL																					
CONDENSATE DRAIN SIZE			mm/in		19.05 / 3/4																					
AIR FILTER			CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)																							
PACKING DIMENSION ( ) - PANEL			HEIGHT		mm/in		380 (130) / 15.0 (5.1)																			
			WIDTH		mm/in		920 (1020) / 36.2 (40.2)																			
			DEPTH		mm/in		920 (1000) / 36.2 (39.4)																			
COMPRESSOR			POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50 / < 380 - 420 / 3 / 50 >										380 - 420 / 3 / 50									
					V/Ph/Hz		208 - 230 / 1 / 60										200 - 230 / 3 / 60									
			COMPRESSOR TYPE		ROTARY (RECIPROCATING) HERMETIC						RECIPROCATING HERMETIC															
			CAPACITOR - µF		50 Hz		45 / < NIL >		45 / < NIL >		50		45 / < NIL >		35		NIL		NIL							
					60 Hz		40		< 35 >		-		45		-		NIL		NIL							
			LOCK ROTOR AMPERE - A		50 Hz		56.0 / < 21.4 >		57.0 / < 24.9 >		66.0		82.0 / < 35 >		97.0		< 48 >		< 66 >							
					60 Hz		37.0		< 70 >		-		88.0		-		< 78 >		< 106 >							
			RATED RUNNING CURRENT - A		50 Hz		10.0 / < 3.7 >		13.8 / < 4.8 >		14.5		12.6 / < 5.2 >		14.8		< 5.8 >		< 8.3 >							
					60 Hz		8.75		< 12.26 >		-		16.30		-		< 11.7 >		< 14.5 >							
			RATED INPUT POWER - W		50 Hz		2080 / < 1950 >		2710 / < 2560 >		2800		2570 / < 3050 >		2960		< 3480 >		< 4940 >							
60 Hz		1910			< 2640 >		-		3420		-		< 4040 >		5270											
PROTECTION DEVICE			OVERLOAD PROTECTION														OVERLOAD PROTECTION AND AUTO RESET HIGH/LOW PRESSURE SWITCH									
FAN			POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50 , 208 - 230 / 1 / 60																			
			FAN TYPE / DRIVE		PROPELLER / DIRECT																					
			BLADE MATERIAL		GLASS REINFORCE ACRYL STYRENE RESIN																					
			DIAMETER		mm/in		406.4 / 16.0						609.6 / 24.0													
			RATED RUNNING CURRENT (A)		50 Hz		0.56				0.6				1.03											
					60 Hz		0.76				-				1.23											
			MOTOR OUTPUT (W)		50 Hz		80						145													
					60 Hz		55				-				145											
			RATED INPUT POWER (W)		50 Hz		133				140				233											
					60 Hz		166				-				261											
COIL			MATERIAL		S.B.C.																					
			DIAMETER		mm/in		9.52 / 3/8																			
			THICKNESS		mm/in		0.35 / 0.014				0.36 / 0.014				0.35 / 0.014											
			MATERIAL		ALUMINIUM (SPLIT FIN TYPE)																					
			THICKNESS		mm/in		0.127 / 0.005																			
PIPE			ROW				2		2		1		2		2											
			FIN PER INCH				14		16		16		14		16											
			FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.51 / 5.53						0.87 / 9.33													
			DIMENSION		HEIGHT		mm/in		646 / 25.40						850 / 33.46											
					WIDTH		mm/in		840 / 33.10						1030 / 40.55											
PACKING DIMENSION			DEPTH		mm/in		330 / 13.00						400 / 15.75													
			WEIGHT		kg		57		58		95		95		100		105									
			SOUND PRESSURE LEVEL		dBA		52		53		56		58		58		58									
CASING			MATERIAL		GALVANISED MILD STEEL																					
			THICKNESS		mm/in		0.8 / 0.031																			
			FINISHING		POLYESTER POWDER																					
PIPE			TYPE		FLARE VALVE																					
			SIZE		mm/in		6.35 / 1/4				9.52 / 3/8				9.52 / 3/8											
					mm/in		15.88 / 5/8				15.88 / 5/8				19.05 / 3/4											
PACKING DIMENSION			HEIGHT		mm/in		710 / 27.95						1000 / 39.37													
			WIDTH		mm/in		957 / 37.68						1200 / 47.24													
			DEPTH		mm/in		461 / 18.15						560 / 22.05													

- 1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
- 2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94
- 3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :  
a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

### Abbreviation

S.B.C.	-	SEAMLESS BARE COPPER
S.I.G.C.	-	SEAMLESS INNER GROOVE COPPER



## CEILING CASSETTE A SERIES (HEAT PUMP)

MODEL		INDOOR UNIT		MCK020AR		MCK025AR		MCK030AR		MCK040AR		MCK050AR					
		OUTDOOR UNIT		MLC020BR		MLC025BR		MLC030BR		MLC030CR		MLC035CR		MLC040CR		MLC050CR	
NOMINAL COOLING CAPACITY		kcal/h		5040		6300		6550		7560		8820		10080		12100	
		W		5860		7330		7620		8790		10260		11720		14070	
		Btu/h		20000		25000		26000		30000		35000		40000		48000	
NOMINAL HEATING CAPACITY		kcal/h		5040		6300		7060		7810		9072		10330		12600	
		W		5860		7330		8210		9090		10550		12020		14650	
		Btu/h		20000		25000		28000		31000		36000		41000		50000	
NOMINAL TOTAL POWER (COOLING) - 1Ø [ 3Ø ]			W (50Hz)	2300 [ 2210 ]		2980 [ 2840 ]		3200		3020 [ 3305 ]		3390		3960 [ 3950 ]		[ 5230 ]	
			W (60Hz)	2079		2811		-		3600		-		[ 4160 ]		[ 5490 ]	
NOMINAL TOTAL POWER (HEATING) - 1Ø [ 3Ø ]			W (50Hz)	1960 [ 2220 ]		2490 [ 2920 ]		2690		2880 [ 3161 ]		3290		3450 [ 3320 ]		[ 4170 ]	
			W (60Hz)	2126		2745		-		3300		-		[ 3611 ]		[ 4330 ]	
NOMINAL TOTAL CURRENT (COOLING) - 1Ø [ 3Ø ]			A (50Hz)	11.1 [ 4.1 ]		14.0 [ 5.2 ]		15.2		14.6 [ 5.6 ]		16.9		20.7 [ 6.1 ]		[ 8.0 ]	
			A (60Hz)	9.7		13.1		-		17.5		-		[ 12.1 ]		[ 15.7 ]	
NOMINAL TOTAL CURRENT (HEATING) - 1Ø [ 3Ø ]			A (50Hz)	9.9 [ 4.1 ]		12.5 [ 5.3 ]		13.7		14.2 [ 5.5 ]		16.3		18.8 [ 5.4 ]		[ 6.8 ]	
			A (60Hz)	10.1		12.9		-		16.4		-		[ 10.9 ]		[ 13.3 ]	
POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50 , 208 - 230 / 1 / 60													
REFRIGERANT / CONTROL				R22 / CAPILLARY TUBE IN OUTDOOR				R22 / CAPILLARY TUBE & TXV IN OUTDOOR									
FAN	AIR FLOW	cfm / L/s		770 / 363		810 / 382		920 / 434				1020 / 481				1080 / 510	
	FAN MOTOR	50Hz		6 POLES x 35W		6 POLES x 50W		6 POLES x 65W				6 POLES x 85W				6 POLES x 120W	
		60Hz		6 POLES x 29W		6 POLES x 45W		-	6 POLES x 60W				6 POLES x 147W				6 POLES x 169W
	RATED INPUT POWER	W (50/60Hz)		127 / 137		151 / 160		164 / -		164 / 198		192 / 308		253 / 329			
RATED RUNNING CURRENT	A (50/60Hz)		0.53 / 0.62		0.65 / 0.73		0.69 / -		0.69 / 0.93		0.80 / 1.42		1.08 / 1.50				
COIL	TUBE	MATERIAL	S.B.C.												S.I.G.C		
		DIAMETER	mm/in	9.52 / 3/8												7.0 / 0.28	
		THICKNESS	mm/in	0.35 / 0.014												0.27 / 0.01	
		MATERIAL	ALUMINIUM												ALUMINIUM (HYDROPHILIC TYPE)		
	FIN	THICKNESS	mm/in	0.11 / 0.0043													
		ROW	2												3		
		FIN PER INCH		12		14		16		20							
	FACE AREA	m²/ft²	0.469 / 5.022														
	DIMENSION ( ) - WITH PANEL	HEIGHT	mm/in	335 (363) / 13.2 (14.3)													
		WIDTH	mm/in	820 (930) / 32.2 (36.6)													
DEPTH		mm/in	820 (930) / 32.2 (36.6)														
WEIGHT (UNIT + PANEL)	kg		31 + 4		32 + 4		35 + 4		38 + 4				40 + 4				
SOUND PRESSURE LEVEL ( H / M / L )		dBA	42 / 39 / 37		45 / 42 / 40		49 / 45 / 43				51 / 48 / 46		53 / 52 / 50				
CONTROL	ROOM TEMPERATURE	MICROCOMPUTER CONTROLLED THERMOSTAT															
	AIR DISCHARGE OPERATION	4 - WAY AUTOMATIC LOUVER ( UP & DOWN )															
		LCD WIRELESS / LED WIRED MICROCOMPUTER REMOTE CONTROL															
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4														
AIR FILTER		WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)															
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 (130) / 15.0 (5.1)														
	WIDTH	mm/in	920 (1020) / 36.2 (40.2)														
	DEPTH	mm/in	920 (1000) / 36.2 (39.4)														

COMPRESSOR	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50 / < 380 - 420 / 3 / 50 >										380 - 420 / 3 / 50		
		V/Ph/Hz	208 - 230 / 1 / 60										200 - 230 / 3 / 60		
	COMPRESSOR TYPE		ROTARY HERMETIC					RECIPROCATING HERMETIC							
	CAPACITOR - µF	50 Hz	45 / < NIL >	45 / < NIL >	50	45 / < NIL >	35	40 / < NIL >	NIL						
	1Ø / < 3Ø >	60 Hz	40	60	-	60	-	NIL	NIL	NIL	NIL				
	LOCK ROTOR AMPERE - A	50 Hz	56 / < 21.4 >	57 / < 24.9 >	66	85 / < 35 >	82	100 / < 45 >	< 62 >						
	1Ø / < 3Ø >	60 Hz	39.6	50	-	88	-	78	< 106 >						
	RATED RUNNING CURR. (COOLING) - A	50 Hz	10.0 / < 3.7 >	12.8 / < 4.8 >	13.9	12.8 / < 5.0 >	15.0	18.8 / < 6.1 >	< 8.0 >						
	1Ø / < 3Ø >	60 Hz	8.30	11.6	-	15.3	-	11.2	< 14.8 >						
	RATED RUNNING CURR. (HEATING) - A	50 Hz	8.9 / < 3.7 >	11.3 / < 4.9 >	12.4	12.5 / < 4.9 >	14.4	16.9 / < 5.4 >	< 6.8 >						
	1Ø / < 3Ø >	60 Hz	8.70	11.4	-	14.2	-	10.0	< 12.4 >						
	RATED INPUT POWER (COOLING) - W	50 Hz	2040 / < 1950 >	2700 / < 2560 >	2890	2610 / < 2900 >	2950	3530 / < 3520 >	< 4740 >						
	1Ø / < 3Ø >	60 Hz	1777	2490	-	3140	-	3590	< 4910 >						
	RATED INPUT POWER (HEATING) - W	50 Hz	1700 / < 1960 >	2210 / < 2640 >	2370	2480 / < 2760 >	2860	3020 / < 2890 >	< 3680 >						
	1Ø / < 3Ø >	60 Hz	1824	2420	-	2840	-	3040	< 3740 >						
	PROTECTION DEVICE		OVERLOAD PROTECTION										OVERLOAD PROTECTION & AUTO RESET HIGH PRESSURE SWITCH		
POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50 , 208 - 230 / 1 / 60													
FAN TYPE / DRIVE		PROPELLER / DIRECT													
BLADE MATERIAL		GLASS REINFORCED ACRYL STYRENE RESIN													
DIAMETER	mm/in	406.4 / 16.0										609.6 / 24.0			
RATED RUNNING CURRENT	A (50/60Hz)	0.56 / 0.76					0.63 / -		1.09 / 1.25		1.09 / 1.25				
MOTOR OUTPUT	W (50/60Hz)	55 / 55					80 / -		145 / 145		145 / 145				
RATED INPUT POWER	W (50/60Hz)	133 / 165					150 / -		241 / 261		241 / 261				
COIL	TUBE	MATERIAL	S.B.C					S.I.G.C					S.I.G.C		
		DIAMETER	mm/in	9.52 / 3/8											
		THICKNESS	mm/in	0.35 / 0.014					0.35 / 0.014					0.36 / 0.014	
		MATERIAL	ALUMINIUM (SLIT FIN TYPE)										ALUMINIUM (CORRUGATED FIN TYPE)		
	FIN	THICKNESS	mm/in	0.127 / 0.005											
		ROW	2												
		FIN PER INCH		14					16					16	
	FACE AREA	m²/ft²	0.51 / 5.53										0.87 / 9.33		
	DIMENSION	HEIGHT	mm/in	646 / 25.40										850 / 33.46	
		WIDTH	mm/in	840 / 33.10										1030 / 40.55	
DEPTH		mm/in	330 / 13.00										400 / 15.75		
WEIGHT		kg	57	58	58	95	95	100	105						
SOUND PRESSURE LEVEL		dBA	52	53	56	58	58	58	58	58	58				
CASING	MATERIAL	GALVANISED MILD STEEL													
	THICKNESS	mm/in	0.8 / 0.031												
	FINISHING	POLYESTER POWDER													
PIPE	TYPE	FLARE VALVE													
	SIZE	LIQUID	mm/in	6.35 / 1/4	9.52 / 3/8					9.52 / 3/8					
PACKING DIMENSION	GAS	mm/in	15.88 / 5/8	15.88 / 5/8					19.05 / 3/4						
	HEIGHT	mm/in	710 / 27.95					1000 / 39.37							
	WIDTH	mm/in	957 / 37.68					1200 / 47.24							
	DEPTH	mm/in	461 / 18.15					560 / 22.05							

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR  
b) HEATING - 21.1°C DB / 15.6°C WB INDOOR AND 8.3°C DB / 6.1°C WB OUTDOOR

### Abbreviation

S.B.C. - SEAMLESS BARE COPPER  
S.I.G.C - SEAMLESS INNER GROOVE COPPER

## CEILING CASSETTE A SERIES (COOLING ONLY – R407C)

MODEL			INDOOR UNIT		MCK020A	MCK025A	MCK030A	MCK040A	MCK050A	
			OUTDOOR UNIT		M4LC020B	M4LC025B	M4LC030C	M4LC040C	M4LC050C	
NOMINAL COOLING CAPACITY		kcal/h	4610	5290	7560	9580	12100			
		W	5360	6160	8790	11130	14070			
		Btu/h	18300	21000	30000	38000	48000			
NOMINAL TOTAL POWER - 1Ø [ 3Ø ]			W	2370 [ 2150 ]	2940 [ 2790 ]	2960 [ 2960 ]	[ 4170 ]	[ 4900 ]		
NOMINAL TOTAL CURRENT - 1Ø [ 3Ø ]			A	11.0 [ 4.0 ]	13.7 [ 4.8 ]	13.2 [ 4.5 ]	[ 6.9 ]	[ 8.5 ]		
INDOOR UNIT	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50						
	REFRIGERANT / CONTROL			R407C / CAPILLARY TUBE (OUTDOOR)			R407C / CAPILLARY TUBE (INDOOR)			
	FAN	AIR FLOW	cfm / L/s	770 / 363	810 / 382	920 / 434	1020 / 481	1080 / 510		
		FAN MOTOR		6 POLES x 35W	6 POLES x 50W	6 POLES x 65W	6 POLES x 85W	6 POLES x 120W		
		RATED INPUT POWER	W	127	151	164	192	253		
		RATED RUNNING CURRENT	A	0.53	0.65	0.69	0.80	1.08		
	COIL	TUBE	MATERIAL	S.B.C.				S.I.G.C		
			DIAMETER	mm/in	9.52 / 3/8				7.0 / 0.28	
			THICKNESS	mm/in	0.35 / 0.014				0.27 / 0.01	
		FIN	MATERIAL	ALUMINIUM				ALUMINIUM (HYDROPHILIC TYPE)		
			THICKNESS	mm/in	0.11 / 0.0043					
			ROW		2	2	2	3	3	
			FIN PER INCH		12	14	16	20	20	
			FACE AREA	m <sup>2</sup> /ft <sup>2</sup>	0.469 / 5.022					
	DIMENSION ( ) - WITH PANEL	HEIGHT	mm/in	335 (363) / 13.2 (14.3)						
		WIDTH	mm/in	820 (930) / 32.2 (36.6)						
		DEPTH	mm/in	820 (930) / 32.2 (36.6)						
	WEIGHT (UNIT + PANEL)		kg	31 + 4	32 + 4	35 + 4	38 + 4	40 + 4		
	SOUND PRESSURE LEVEL ( H / M / L )		dBA	42 / 39 / 37	45 / 42 / 40	49 / 45 / 43	51 / 48 / 46	53 / 52 / 50		
	CONTROL	ROOM TEMPERATURE		MICROCOMPUTER CONTROLLED THERMOSTAT						
		AIR DISCHARGE		4-WAY AUTOMATIC LOUVER ( UP & DOWN )						
		OPERATION		LCD WIRELESS MICROCOMPUTER REMOTE CONTROL / LED WIRED MICROCOMPUTER REMOTE CONTROL						
	CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4						
	AIR FILTER			CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)						
	PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 (130) / 15.0 (5.1)						
		WIDTH	mm/in	920 (1020) / 36.2 (40.2)						
		DEPTH	mm/in	920 (1000) / 36.2 (39.4)						
OUTDOOR UNIT	COMPRESSOR	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50 / < 380 - 420 / 3 / 50 >			380 - 420 / 3 / 50		
		COMPRESSOR TYPE			ROTARY HERMETIC			SCROLL		
		CAPACITOR	µF	45 / < NIL >	50 / < NIL >	60.5 / < NIL >	NIL	NIL		
		LOCK ROTOR AMPERE	A	54 / < 21 >	58 / < 26 >	82 / < 40 >	50	62		
		RATED RUNNING CURRENT	A	9.91 / < 3.6 >	12.50 / < 4.8 >	11.40 / < 4.5 >	6.30	8.20		
		RATED INPUT POWER	W	2110 / < 1890 >	2660 / < 2510 >	2550 / < 2550 >	3740	4330		
		PROTECTION DEVICE			OVERLOAD PROTECTION		O/LOAD PROTECTION & AUTO RESET H/L PRESSURE SW.			
	FAN	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50					
		FAN TYPE / DRIVE			PROPELLER / DIRECT					
		BLADE MATERIAL			GLASS REINFORCE ACRYL STYRENE RESIN					
		DIAMETER	mm/in	406.4 / 16			609.6 / 24.0			
		RATED RUNNING CURRENT	A	0.56			1.09			
		MOTOR OUTPUT	W	55			145			
		RATED INPUT POWER	W	133			241			
	COIL	TUBE	MATERIAL	SEAMLESS COPPER						
			DIAMETER	mm/in	9.52 / 3/8					
			THICKNESS	mm/in	0.36 / 0.014					
		FIN	MATERIAL	ALUMINIUM (SPLIT FIN TYPE)						
			THICKNESS	mm/in	0.127 / 0.005					
			ROW		2		1	2	2	
			FIN PER INCH		14		16	16	16	
			FACE AREA	m <sup>2</sup> /ft <sup>2</sup>	0.51 / 5.53			0.87 / 9.33		
	DIMENSION	HEIGHT	mm/in	646 / 25.40			850 / 33.46			
		WIDTH	mm/in	840 / 33.10			1030 / 40.53			
		DEPTH	mm/in	MICROCOMPUTER CONTROLLED THERMOSTAT			400 / 15.75			
	WEIGHT		kg	57	58	95	100	105		
	SOUND PRESSURE LEVEL		dBA	52	53	58	58	58		
CASING	MATERIAL		GALVANISED MILD STEEL							
	THICKNESS	mm/in	0.8 / 0.031							
	FINISHING		EPOXY POLYESTER POWDER							
PIPE	TYPE		FLARE VALVE / AEROQUIP			FLARE VALVE				
	SIZE	LIQUID	mm/in	6.35 / 1/4	9.52 / 3/8		9.52 / 3/8			
		GAS	mm/in	15.88 / 5/8	15.88 / 5/8		19.05 / 3/4			
PACKING DIMENSION	HEIGHT	mm/in	710 / 27.95			1000 / 39.37				
	WIDTH	mm/in	957 / 37.68			1200 / 47.24				
	DEPTH	mm/in	461 / 18.15			560 / 22.05				
REFRIGERANT CHARGE		kg	1.65	1.65	1.75	3.13	3.55			

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

### Abbreviation

S.B.C. - SEAMLESS BARE COPPER  
S.I.G.C. - SEAMLESS INNER GROOVE COPPER

## CEILING CASSETTE A SERIES (HEAT PUMP – R407C)

MODEL			INDOOR UNIT		MCK020AR	MCK025AR	MCK030AR	MCK040AR	MCK050AR
			OUTDOOR UNIT		M4LC020BR	M4LC025BR	M4LC030CR	M4LC040CR	M4LC050CR
NOMINAL COOLING CAPACITY		kcal/h	4540	5170	7310	9830	12100		
		W	5270	6010	8500	11430	14070		
		Btu/h	18000	20500	29000	39000	48000		
		kcal/h	4790	6050	7810	10330	12600		
NOMINAL HEATING CAPACITY		W	5570	7030	9080	12010	14650		
		Btu/h	19000	24000	31000	41000	50000		
	NOMINAL TOTAL POWER (COOLING) - 1Ø [ 3Ø ]		W	2260 [ 2150 ]	2860 [ 2790 ]	2850 [ 2820 ]	[ 4000 ]	[ 4750 ]	
	NOMINAL TOTAL POWER (HEATING) - 1Ø [ 3Ø ]		W	2360 [ 2060 ]	2830 [ 2680 ]	2750 [ 2790 ]	[ 3710 ]	[ 4970 ]	
NOMINAL TOTAL CURRENT (COOLING) - 1Ø [ 3Ø ]		A	10.6 [ 3.6 ]	13.8 [ 4.8 ]	13.4 [ 4.3 ]	[ 6.8 ]	[ 8.4 ]		
NOMINAL TOTAL CURRENT (HEATING) - 1Ø [ 3Ø ]		A	11.2 [ 3.4 ]	13.7 [ 4.5 ]	12.9 [ 4.2 ]	[ 6.5 ]	[ 8.6 ]		
POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50					
INDOOR UNIT	REFRIGERANT / CONTROL			R407C / CAPILLARY TUBE (OUTDOOR)		R407C / TXV (OUTDOOR)	R407C / CAPILLARY TUBE + TXV (OUTDOOR)		
	FAN	AIR FLOW	cfm / L/s	770 / 363	810 / 382	920 / 434	1020 / 481	1080 / 510	
		FAN MOTOR		6 POLES x 35W	6 POLES x 50W	6 POLES x 65W	6 POLES x 85W	6 POLES x 120W	
		RATED INPUT POWER	W	127	151	164	192	253	
		RATED RUNNING CURRENT	A	0.53	0.65	0.69	0.8	1.08	
	COIL	MATERIAL		S.B.C.					S.I.G.C
		DIAMETER	mm/in	9.52 / 3/8					7.0 / 0.28
		THICKNESS	mm/in	0.35 / 0.014					0.27 / 0.01
		MATERIAL		ALUMINIUM					ALUMINIUM (HYDROPHILIC TYPE)
	FIN	THICKNESS	mm/in	0.11 / 0.0043					
ROW			2	2	2	3	3		
FIN PER INCH			12	16	16	20	20		
FACE AREA		m <sup>2</sup> /ft <sup>2</sup>	0.469 / 5.022						
DIMENSION		HEIGHT	mm/in	335 (363) / 13.2 (14.3)					
()	- WITH PANEL	WIDTH	mm/in	820 (930) / 32.2 (36.6)					
		DEPTH	mm/in	820 (930) / 32.2 (36.6)					
WEIGHT (UNIT + PANEL)		kg	31 + 4	32 + 4	35 + 4	38 + 4	40 + 4		
SOUND PRESSURE LEVEL ( H / M / L )		dBA	42 / 39 / 37	45 / 42 / 40	49 / 45 / 43	51 / 48 / 46	53 / 52 / 50		
CONTROL	ROOM TEMPERATURE		MICROCOMPUTER CONTROLLED THERMOSTAT						
	AIR DISCHARGE OPERATION		4 - WAY AUTOMATIC LOUVER ( UP & DOWN )						
			LCD WIRELESS / LED WIRED MICROCOMPUTER REMOTE CONTROL						
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4						
AIR FILTER			WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)						
PACKING DIMENSION	HEIGHT	mm/in	380 (130) / 15.0 (5.1)						
	WIDTH	mm/in	920 (1020) / 36.2 (40.2)						
	DEPTH	mm/in	920 (1000) / 36.2 (39.4)						
OUTDOOR UNIT	POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50 / < 380 - 420 / 3 / 50 >			380 - 420 / 3 / 50	
	COMPRESSOR TYPE			ROTARY HERMETIC			SCROLL		
	CAPACITOR	µF	45 / < NIL >	50 / < NIL >	50 / < NIL >	NIL	NIL		
	LOCK ROTOR AMPERE	A	54 / < 21 >	58 / < 26 >	82 / < 40 >	50	62		
	RATED RUNNING CURRENT (COOLING)	A	9.5 / < 3.6 >	12.6 / < 4.8 >	11.6 / < 4.3 >	6.2	8.4		
	RATED RUNNING CURRENT (HEATING)	A	10.1 / < 3.4 >	12.5 / < 4.5 >	11.1 / < 4.2 >	5.9	8.6		
	RATED INPUT POWER (COOLING)	W	2000 / < 1890 >	2570 / < 2510 >	2440 / < 2410 >	3560	4560		
	RATED INPUT POWER (HEATING)	W	2100 / < 1800 >	2550 / < 2400 >	2340 / < 2390 >	3280	4480		
	PROTECTION DEVICE			OVERLOAD PROTECTION			ERLOAD PROTECTION & AUTO RESET HIGH PRESSURE SWIT		
	POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50				
FAN	FAN TYPE / DRIVE			PROPELLER / DIRECT					
	BLADE MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN					
	DIAMETER	mm/in	406.4 / 16.0			609.6 / 24.0			
	RATED RUNNING CURRENT	A	0.56			1.09			
	MOTOR OUTPUT	W	55			145			
	RATED INPUT POWER	W	133			241			
COIL	MATERIAL		SEAMLESS COPPER						
	DIAMETER	mm/in	9.52 / 3/8						
	THICKNESS	mm/in	0.36/ 0.014						
	MATERIAL		ALUMINIUM (SLIT FIN TYPE)						
	THICKNESS	mm/in	0.127 / 0.005						
	ROW		2			2			
	FIN PER INCH		14			16			
FACE AREA		m <sup>2</sup> /ft <sup>2</sup>	0.51 / 5.53			0.87 / 9.33			
DIMENSION	HEIGHT	mm/in	646 / 25.40			850 / 33.46			
	WIDTH	mm/in	840 / 33.10			1029 / 40.53			
	DEPTH	mm/in	330 / 13.00			400 / 15.75			
WEIGHT		kg	57	58	95	100	105		
SOUND PRESSURE LEVEL		dBA	52	53	58	58	58		
CASING	MATERIAL		GALVANISED MILD STEEL						
	THICKNESS	mm/in	0.8 / 0.031						
	FINISHING		EPOXY POLYESTER POWDER						
PIPE	TYPE		FLARE VALVE / AEROQUIP			FLARE VALVE			
	SIZE								
	LIQUID	mm/in	6.35 / 1/4			9.52 / 3/8			
PACKING DIMENSION	GAS	mm/in	15.88 / 5/8			15.88 / 5/8			
	HEIGHT	mm/in	710 / 27.95			1000 / 39.37			
	WIDTH	mm/in	957 / 37.68			1200 / 47.24			
REFRIGERANT CHARGE	DEPTH	mm/in	461 / 18.15			560 / 22.05			
	kg		1.70	1.65	2.35	3.10	3.35		

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR  
b) HEATING - 21.1°C DB / 15.6°C WB INDOOR AND 8.3°C DB / 6.1°C WB OUTDOOR

### Abbreviation

S.B.C.	-	SEAMLESS BARE COPPER
S.I.G.C	-	SEAMLESS INNER GROOVE COPPER

## CEILING CASSETTE B SERIES (COOLING ONLY)

MODEL			INDOOR UNIT		MCK015B		MCK020B		MCK025B		MCK030B				
			OUTDOOR UNIT		MLC015B		MLC020B		MLC025B		MLC030B		MLC030C		
NOMINAL COOLING CAPACITY			kcal/h	3150		4790		6050		6800		7560			
			W	3660		5570		7030		7910		8792			
			Btu/h	12500		19000		24000		27000		30000			
NOMINAL TOTAL POWER - 1Ø [ 3Ø ]			W	1410		2350		2850		3060		3020			
NOMINAL TOTAL CURRENT - 1Ø [ 3Ø ]			A	6.2		10.9		13.2		14.5		14.7			
INDOOR UNIT	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50											
	REFRIGERANT / CONTROL			R22 / CAPILLARY TUBE IN OUTDOOR						R22 / CAPILLARY TUBE IN INDOOR					
	FAN	AIR FLOW		cfm / L/s	430 / 203		430 / 203		500 / 236		660 / 312				
		FAN MOTOR			6 POLES		6 POLES		6 POLES		6 POLES				
		RATED INPUT POWER		W	72		72		79		108				
		RATED RUNNING CURRENT		A	0.3		0.3		0.3		0.5				
	COIL	TUBE	MATERIAL		S.I.G.C										
			DIAMETER		mm/in		9.52 / 3/8								
			THICKNESS		mm/in		0.35 / 0.014								
		FIN	MATERIAL		ALUMINIUM (SLIT FIN )										
			THICKNESS		mm/in		0.11 / 0.0043								
			ROW				1				2				
			FIN PER INCH				18				14				
		FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.39 / 4.2						0.38 / 4.1			
	DIMENSION ( ) - WITH PANE	HEIGHT		mm/in		293 (345) / 11.5 (13.6)									
		WIDTH		mm/in		650 (727) / 25.6 (28.6)									
		DEPTH		mm/in		650 (727) / 25.6 (28.6)									
	WEIGHT ( UNIT + PANEL)			kg	30 + 3		30 + 3		31 + 3		32 + 3				
	SOUND PRESSURE LEVEL ( H / M / L )			dBA	41 / 38 / 36		42 / 40 / 37		45 / 42 / 39		48 / 45 / 42				
	CONTROL	ROOM TEMPERATURE			MICROCOMPUTER CONTROLLED THERMOSTAT										
AIR DISCHARGE OPERATION			4 WAY AUTOMATIC LOUVER (UP & DOWN)												
			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL												
CONDENSATE DRAIN SIZE			mm/in		19.05 / 3/4										
AIR FILTER			CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)												
PACKING DIMENSION ( ) - PANEL	HEIGHT		mm/in		360 (110) / 14.2 (4.3)										
	WIDTH		mm/in		725 (840) / 28.5 (33.1)										
	DEPTH		mm/in		725 (840) / 28.5 (33.1)										
COMPRESSOR	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50 / < 380 - 415 / 3 / 50 >											
	COMPRESSOR TYPE			ROTARY HERMETIC								RECIPROCATING			
	CAPACITOR		µF	30		45		45		50		45			
	LOCK ROTOR AMP.		A	25		56		57		66		85			
	RATED RUNNING CURRENT		A	5.6		10.1		12.3		13.5		13.1			
	RATED INPUT POWER		W	1280		2150		2640		2800		2670			
	PROTECTION DEVICE			OVERLOAD PROTECTION								O/L & H-L PRESSURE SW			
	POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50										
	FAN TYPE / DRIVE			PROPELLER / DIRECT											
	BLADE MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN											
FAN	DIAMETER		mm/in		355 / 14		406.4 / 16.0				610 / 24				
	RATED RUNNING CURRENT		A		0.28		0.56		0.63		1.09				
	MOTOR POWER		W		30		55		80		145				
	RATED INPUT POWER		W		62		133		150		241				
	TUBE	MATERIAL				S.I.G.C		S.B.C		S.I.G.C		S.I.G.C		S.B.C.	
		DIAMETER		mm/in		9.52 / 3/8									
		THICKNESS		mm/in		0.35 / 0.014				0.36 / 0.014		0.35 / 0.014			
		MATERIAL				ALUMINIUM (SLIT FIN )							ALUMINIUM (CORR.)		
	FIN	THICKNESS		mm/in		0.127 / 0.005									
ROW				1		2		2		1					
FIN PER INCH				19		14		14		16					
FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.32 / 3.5				0.51 / 5.53		0.87 / 9.33					
DIMENSION	HEIGHT		mm/in		494 / 19.4				646 / 25.4		850 / 33.5				
	WIDTH		mm/in		740 / 29.1				840 / 33.1		1030 / 40.6				
	DEPTH		mm/in		270 / 10.6				330 / 13.0		400 / 15.8				
WEIGHT			kg	34		57		58		58		95			
SOUND PRESSURE LEVEL			dBA	49		52		53		56		58			
CASING	MATERIAL		GALVANISED MILD STEEL												
	THICKNESS		mm/in		0.8 / 0.031										
	FINISHING		POLYESTER POWDER												
PIPE	TYPE		FLARE VALVE												
	SIZE	LIQUID	mm/in		6.35 / 1/4		6.35 / 1/4		9.52 / 3/8						
		GAS	mm/in		12.70 / 1/2		15.88 / 5/8		15.88 / 5/8						
PACKING DIMENSION	HEIGHT		mm/in		558 / 22.0				710 / 28.0		1000 / 39.4				
	WIDTH		mm/in		851 / 33.5				957 / 37.7		1200 / 47.2				
	DEPTH		mm/in		401 / 15.8				461 / 18.1		560 / 22.1				

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a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

### Abbreviation

S.B.C. - SEAMLESS BARE COPPER  
S.I.G.C - SEAMLESS INNER GROOVE COPPER

## CEILING CASSETTE B SERIES (HEAT PUMP)

MODEL			INDOOR UNIT		MCK015BR		MCK020BR		MCK025BR		MCK030BR		MCK030CR			
			OUTDOOR UNIT		MLC015BR		MLC020BR		MLC025BR		MLC030BR		MLC030CR			
INDOOR UNIT	NOMINAL COOLING CAPACITY		kcal/h		3100		4790		6050		6550		7060			
			W		3600		5570		7030		7620		8210			
	CAPACITY		Btu/h		12300		19000		24000		26000		28000			
	NOMINAL HEATING CAPACITY		kcal/h		3020		4790		6050		7060		7310			
			W		3520		5570		7030		8210		8500			
	CAPACITY		Btu/h		12000		19000		24000		28000		29000			
	NOMINAL TOTAL POWER (COOLING) - 1Ø [ 3Ø ]		W		1360		2350		2850		3060		2730			
	NOMINAL TOTAL POWER (HEATING) - 1Ø [ 3Ø ]		W		1100		2110		2670		2910		2820			
	NOMINAL TOTAL CURRENT (COOLING) - 1Ø [ 3Ø ]		A		6.0		10.9		13.2		15.1		13.4			
	NOMINAL TOTAL CURRENT (HEATING) - 1Ø [ 3Ø ]		A		5.0		10.2		12.5		14.7		15.4			
INDOOR UNIT	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50												
	REFRIGERANT / CONTROL			R22 / CAPILLARY TUBE IN OUTDOOR												
	FAN	AIR FLOW		cfm / L/s	430 / 203					500 / 236			610 / 288			
		FAN MOTOR			6 POLES											
		RATED INPUT POWER		W	72					79			108			
		RATED RUNNING CURRENT		A	0.3					0.3			0.5			
	COIL	TUBE	MATERIAL		S.I.G.C											
			DIAMETER		mm/in	9.52 / 3/8										
		FIN	THICKNESS		mm/in	0.35 / 0.014										
			MATERIAL		ALUMINIUM (SLIT FIN )											
		THICKNESS		mm/in	0.11 / 0.0043											
		ROW			1					2						
		FIN PER INCH			18					14						
		FACE AREA		m <sup>2</sup> /ft <sup>2</sup>	0.39/4.2					0.38/4.1						
	DIMENSION ( ) - WITH PANEL	HEIGHT		mm/in	293 (345) / 11.5 (13.6)											
		WIDTH		mm/in	650 (727) / 25.6 (28.6)											
		DEPTH		mm/in	650 (727) / 25.6 (28.6)											
	WEIGHT ( UNIT + PANEL )		kg	30 + 3			30 + 3			31 + 3			32 + 3			
	SOUND PRESSURE LEVEL ( H / M / L )		dBA	41 / 38 / 36			42 / 40 / 37			45 / 42 / 39			48 / 45 / 42			
	CONTROL	ROOM TEMPERATURE		MICROCOMPUTER CONTROLLED THERMOSTAT												
AIR DISCHARGE OPERATION		4 WAY AUTOMATIC LOUVER (UP & DOWN)														
		WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL														
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4													
AIR FILTER			CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)													
PACKING DIMENSION ( ) - PANEL	HEIGHT		mm/in	360 (110) / 14.2 (4.3)												
	WIDTH		mm/in	725 (840) / 28.5 (33.1)												
	DEPTH		mm/in	725 (840) / 28.5 (33.1)												
COMPRESSOR	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50 / < 380 - 415 / 3 / 50 >												
	COMPRESSOR TYPE			ROTARY HERMETIC									RECIPROCATING HER.			
	CAPACITOR		µF	30		45		45		50		45				
	LOCK ROTOR AMP.		A	25		56		57		66		85				
	RATED RUNNING CURRENT (COOLING)		A	5.4		10.1		12.3		14.0		11.8				
	RATED RUNNING CURRENT (HEATING)		A	4.4		9.3		11.6		13.6		1.9				
	RATED INPUT POWER (COOLING)		W	1230		2150		2640		2800		2390				
	RATED INPUT POWER (HEATING)		W	970		1910		2460		2650		2470				
	PROTECTION DEVICE			OVERLOAD PROTECTION									D/L & HI PRESSURE SW			
	FAN	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50											
FAN TYPE / DRIVE			PROPELLER / DIRECT													
BLADE MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN													
DIAMETER		mm/in	355 / 14			406.4 / 16.0					610 / 24					
RATED RUNNING CURRENT		A	0.28			0.56			0.63			1.09				
MOTOR POWER		W	30			55			80			145				
RATED INPUT POWER		W	62			133			150			241				
COIL		TUBE	MATERIAL		S.I.G.C			S.B.C			S.I.G.C			S.I.G.C		
			DIAMETER		mm/in							9.52 / 3/8				
		FIN	THICKNESS		mm/in	0.35 / 0.014					0.36 / 0.014 AVERAGE			0.35 / 0.014		
	MATERIAL		ALUMINIUM (SLIT FIN )													
	THICKNESS		mm/in	0.127 / 0.005												
	ROW			1			2			2			1			
	FIN PER INCH			19			14			14			16			
	FACE AREA		m <sup>2</sup> /ft <sup>2</sup>	0.32 / 3.5			0.51 / 5.53					0.87 / 9.33				
DIMENSION	HEIGHT		mm/in	494 / 19.4			646 / 25.4					850 / 33.5				
	WIDTH		mm/in	740 / 29.1			840 / 33.1					1030 / 40.6				
	DEPTH		mm/in	270 / 10.6			330 / 13.0					400 / 15.8				
WEIGHT		kg	34			57			58			58				
SOUND PRESSURE LEVEL		dBA	49			52			53			56				
CASING	MATERIAL		GALVANISED MILD STEEL													
	THICKNESS		mm/in	0.8 / 0.031												
	FINISHING			POLYESTER POWDER												
PIPE	TYPE		FLARE VALVE													
	SIZE	LIQUID	mm/in	6.35 / 1/4			6.35 / 1/4			9.52 / 3/8						
		GAS	mm/in	12.70 / 1/2			15.88 / 5/8			15.88 / 5/8						
PACKING DIMENSION	HEIGHT		mm/in	558 / 22.0			710 / 28.0					1000 / 39.4				
	WIDTH		mm/in	851 / 33.5			957 / 37.7					1200 / 47.2				
	DEPTH		mm/in	401 / 15.8			461 / 18.1					560 / 22.1				

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR  
b) HEATING - 21.1°C DB / 15.6°C WB INDOOR AND 8.3°C DB / 6.1°C WB OUTDOOR

### Abbreviation

S.B.C.	-	SEAMLESS BARE COPPER
S.I.G.C	-	SEAMLESS INNER GROOVE COPPER

# CEILING CASSETTE B SERIES (COOLING ONLY – R407C)

MODEL			INDOOR UNIT		MCK015B		MCK020B		MCK025B		MCK030B			
			OUTDOOR UNIT		M4LC015B		M4LC020B		M4LC025B		M4LC030C			
NOMINAL COOLING CAPACITY			kcal/h		2900		4540		5540		6800			
			W		3370		5280		6450		7910			
CAPACITY			Btu/h		11500		18000		22000		27000			
NOMINAL TOTAL POWER - 1Ø [ 3Ø ]			W		1500		2440 [ 2100 ]		2900 [ 2720 ]		2950			
NOMINAL TOTAL CURRENT - 1Ø [ 3Ø ]			A		6.6		11.3 [ 3.6 ]		13.5 [ 4.8 ]		14.0			
INDOOR UNIT	POWER SOURCE			V/Ph/Hz		220 - 240 / 1 / 50								
	REFRIGERANT / CONTROL			R407C / CAPILLARY TUBE IN OUTDOOR							R407C / CAP. TUBE (INDOOR)			
	FAN	AIR FLOW		cfm / L/s		430 / 103		430 / 203		500 / 236		610 / 288		
		FAN MOTOR				6 POLES		6 POLES		6 POLES		6 POLES		
		RATED INPUT POWER		W		72		72		79		108		
		RATED RUNNING CURRENT		A		0.3		0.3		0.3		0.5		
	COIL	TUBE	MATERIAL		S.I.G.C									
			DIAMETER		mm/in		9.52 / 3/8							
			THICKNESS		mm/in		0.35 / 0.014							
		FIN	MATERIAL		ALUMINIUM (SLIT FIN )									
			THICKNESS		mm/in		0.11 / 0.0043							
			ROW				1				2			
		FIN PER INCH				18				14				
		FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.39 / 4.2						0.38 / 4.1		
	DIMENSION ( ) - WITH PANE		HEIGHT		mm/in		293 (345) / 11.5 (13.6)							
			WIDTH		mm/in		650 (727) / 25.6 (28.6)							
			DEPTH		mm/in		650 (727) / 25.6 (28.6)							
	WEIGHT ( UNIT + PANEL )		kg		30 + 3		30 + 3		31 + 3		32 + 3			
	SOUND PRESSURE LEVEL ( H / M / L )		dBA		41 / 38 / 36		42 / 40 / 37		45 / 42 / 39		48 / 45 / 42			
	CONTROL		ROOM TEMPERATURE		MICROCOMPUTER CONTROLLED THERMOSTAT									
			AIR DISCHARGE		4 WAY AUTOMATIC LOUVER (UP & DOWN)									
			OPERATION		WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL									
	CONDENSATE DRAIN SIZE		mm/in		19.05 / 3/4									
	AIR FILTER			CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)										
	PACKING DIMENSION ( ) - PANEL		HEIGHT		mm/in		360 (110) / 14.2 (4.3)							
			WIDTH		mm/in		725 (840) / 28.5 (33.1)							
DEPTH			mm/in		725 (840) / 28.5 (33.1)									
OUTDOOR UNIT	POWER SOURCE			V/Ph/Hz		220 - 240 / 1 / 50 / < 380 - 415 / 3 / 50 >								
	COMPRESSOR TYPE			ROTARY HERMETIC									SCROLL	
	CAPACITOR			µF		30		45 / < NIL >		50 / < NIL >		50		
	LOCK ROTOR AMP.			A		32		58 / < 21 >		58 / < 26 >		82		
	RATED RUNNING CURRENT			A		6.0		10.4 / < 3.6 >		12.6 / < 4.8 >		12.5		
	RATED INPUT POWER			W		1370		2240 / < 1890 >		2690 / < 2510 >		2600		
	PROTECTION DEVICE			OVERLOAD PROTECTION									O/L & H-L PRESSURE SW	
	POWER SOURCE			V/Ph/Hz		220 - 240 / 1 / 50								
	FAN TYPE / DRIVE			PROPELLER / DIRECT										
	BLADE MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN										
	FAN	DIAMETER		mm/in		355 / 14		406.4 / 16.0				610 / 24		
		RATED RUNNING CURRENT		A		0.28		0.56				1.09		
		MOTOR OUTPUT		W		30		55				145		
		RATED INPUT POWER		W		62		133				241		
	COIL	TUBE	MATERIAL				S.I.G.C		S.B.C		S.I.G.C		S.B.C.	
			DIAMETER		mm/in		9.52 / 3/8							
			THICKNESS		mm/in		0.35 / 0.014				0.36 / 0.014		0.35 / 0.014	
		FIN	MATERIAL				ALUMINIUM (SLIT FIN )						ALUMINIUM (CORR.)	
			THICKNESS		mm/in		0.127 / 0.005							
			ROW				1		2		2		1	
		FIN PER INCH				19		14		14		16		
		FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.32 / 3.5				0.51 / 5.53				0.87 / 9.33
	DIMENSION		HEIGHT		mm/in		494 / 19.4				646 / 25.4		850 / 33.5	
			WIDTH		mm/in		740 / 29.1				840 / 33.1		1030 / 40.6	
			DEPTH		mm/in		270 / 10.6				330 / 13.0		400 / 15.8	
	WEIGHT		kg		34		57		58		95			
SOUND PRESSURE LEVEL		dBA		49		52		53		58				
CASING		MATERIAL		GALVANISED MILD STEEL										
		THICKNESS		mm/in		0.8 / 0.031								
		FINISHING		POLYESTER POWDER										
PIPE	TYPE				FLARE VALVE									
	SIZE				6.35 / 1/4		6.35 / 1/4				9.52 / 3/8			
	GAS		mm/in		12.70 / 1/2		15.88 / 5/8				15.88 / 5/8			
PACKING DIMENSION		HEIGHT		mm/in		558 / 22.0		710 / 28.0				1000 / 39.4		
DIMENSION		WIDTH		mm/in		851 / 33.5		957 / 37.7				1200 / 47.2		
		DEPTH		mm/in		401 / 15.8		461 / 18.1				560 / 22.1		

- 1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
- 2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94
- 3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
  - a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

## Abbreviation

S.B.C.	-	SEAMLESS BARE COPPER
S.I.G.C	-	SEAMLESS INNER GROOVE COPPER

## CEILING CASSETTE B SERIES (HEAT PUMP – R407C)

MODEL		INDOOR UNIT		MCK015BR		MCK020BR		MCK025BR		MCK030BR		
		OUTDOOR UNIT		M4LC015BR		M4LC020BR		M4LC025BR		M4LC030CR		
NOMINAL COOLING CAPACITY		kcal/h	2900	4540	5540	6800						
		W	3370	5280	6450	7910						
CAPACITY		Btu/h	11500	18000	22000	27000						
NOMINAL HEATING CAPACITY		kcal/h	2770	5040	5540	7060						
		W	3220	5860	6450	8210						
CAPACITY		Btu/h	11000	20000	22000	28000						
NOMINAL TOTAL POWER (COOLING) - 1Ø [ 3Ø ]		W	1500	2440 [ 2100 ]	2900 [ 2720 ]	2950						
NOMINAL TOTAL POWER (HEATING) - 1Ø [ 3Ø ]		W	1210	2300 [ 2000 ]	2710 [ 2610 ]	2850						
NOMINAL TOTAL CURRENT (COOLING) - 1Ø [ 3Ø ]		A	6.6	11.3 [ 3.6 ]	13.5 [ 4.8 ]	14.0						
NOMINAL TOTAL CURRENT (HEATING) - 1Ø [ 3Ø ]		A	5.5	11.0 [ 3.4 ]	12.7 [ 4.5 ]	13.4						
INDOOR UNIT	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50								
	REFRIGERANT / CONTROL			R407C / CAP. TUBE IN OUTDOOR						R407C / TXV IN OUTDOOR		
	FAN	AIR FLOW		cfm / L/s	430 / 103	430 / 203	500 / 236	610 / 288				
		FAN MOTOR			6 POLES	6 POLES	6 POLES	6 POLES				
		RATED INPUT POWER		W	72	72	79	108				
		RATED RUNNING CURRENT		A	0.3	0.3	0.3	0.5				
	COIL	TUBE MATERIAL			S.I.G.C							
		DIAMETER		mm/in	9.52 / 3/8							
		THICKNESS		mm/in	0.35 / 0.014							
		FIN MATERIAL			ALUMINIUM (SLIT FIN )							
		THICKNESS		mm/in	0.11 / 0.0043							
		ROW			1	2						
		FIN PER INCH			18	14						
		FACE AREA		m²/ft²	0.39 / 4.2	0.38 / 4.1						
	DIMENSION ( ) - WITH PANEL		HEIGHT	mm/in	293 (345) / 11.5 (13.6)							
			WIDTH	mm/in	650 (727) / 25.6 (28.6)							
			DEPTH	mm/in	650 (727) / 25.6 (28.6)							
	WEIGHT ( UNIT + PANEL )		kg	30 + 3	30 + 3	31 + 3	32 + 3					
	SOUND PRESSURE LEVEL ( H / M / L )		dBA	41 / 38 / 36	42 / 40 / 37	45 / 42 / 39	48 / 45 / 42					
	CONTROL		ROOM TEMPERATURE	MICROCOMPUTER CONTROLLED THERMOSTAT								
			AIR DISCHARGE	4 WAY AUTOMATIC LOUVER (UP & DOWN)								
			OPERATION	WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL								
	CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4								
	AIR FILTER			CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)								
	PACKING DIMENSION ( ) - PANEL		HEIGHT	mm/in	360 (110) / 14.2 (4.3)							
			WIDTH	mm/in	725 (840) / 28.5 (33.1)							
			DEPTH	mm/in	725 (840) / 28.5 (33.1)							
	OUTDOOR UNIT	POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50 / < 380 - 415 / 3 / 50 >							
COMPRESSOR TYPE			ROTARY HERMETIC						SCROLL			
CAPACITOR		µF	30	45 / < NIL >	50 / < NIL >	50						
LOCK ROTOR AMP.		A	32	58 / < 21 >	58 / < 26 >	82						
RATED RUNNING CURRENT (COOLING)		A	6.0	10.4 / < 3.6 >	12.6 / < 4.8 >	12.5						
RATED RUNNING CURRENT (HEATING)		A	4.9	10.1 / < 3.4 >	11.8 / < 4.5 >	11.9						
RATED INPUT POWER (COOLING)		W	1370	2240 / < 1890 >	2690 / < 2510 >	2600						
RATED INPUT POWER (HEATING)		W	1080	2090 / < 1800 >	2500 / < 2400 >	2500						
PROTECTION DEVICE			OVERLOAD PROTECTION						O/L & HI PRESSURE SW.			
FAN		POWER SOURCE		V/Ph/Hz	220 - 240 / 1 / 50							
		FAN TYPE / DRIVE			PROPELLER / DIRECT							
		BLADE MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN							
		DIAMETER		mm/in	355 / 14	406.4 / 16.0		610 / 24				
		RATED RUNNING CURRENT		A	0.28	0.56		1.09				
		MOTOR OUTPUT		W	30	55		145				
		RATED INPUT POWER		W	62	133		241				
		COIL	TUBE MATERIAL			S.I.G.C	S.B.C		S.I.G.C		S.B.C	
DIAMETER			mm/in	9.52 / 3/8								
THICKNESS			mm/in	0.35 / 0.014				0.36 / 0.014		0.35 / 0.014		
FIN MATERIAL				ALUMINIUM (SLIT FIN )						ALUMINIUM (CORR.)		
THICKNESS			mm/in	0.127 / 0.005								
ROW				1	2		2					
FIN PER INCH				19	14		14					
FACE AREA			m²/ft²	0.32 / 3.5	0.51 / 5.53		0.87 / 9.33					
DIMENSION		HEIGHT	mm/in	494 / 19.4		646 / 25.4		850 / 33.5				
		WIDTH	mm/in	740 / 29.1		840 / 33.1		1030 / 40.6				
		DEPTH	mm/in	270 / 10.6		330 / 13.0		400 / 15.8				
WEIGHT		kg	34	57		58		95				
SOUND PRESSURE LEVEL		dBA	49	52		53		58				
CASING		MATERIAL	GALVANISED MILD STEEL									
		THICKNESS	mm/in	0.8 / 0.031								
		FINISHING	POLYESTER POWDER									
PIPE	TYPE		FLARE VALVE									
	SIZE											
	LIQUID		mm/in	6.35 / 1/4		6.35 / 1/4		9.52 / 3/8				
	GAS		mm/in	12.70 / 1/2		15.88 / 5/8		15.88 / 5/8				
PACKING DIMENSION		HEIGHT	mm/in	558 / 22.0		710 / 28.0		1000 / 39.4				
		WIDTH	mm/in	851 / 33.5		957 / 37.7		1200 / 47.2				
		DEPTH	mm/in	401 / 15.8		461 / 18.1		560 / 22.1				

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR  
b) HEATING - 21.1°C DB / 15.6°C WB INDOOR AND 8.3°C DB / 6.1°C WB OUTDOOR

### Abbreviation

S.B.C. - SEAMLESS BARE COPPER  
S.I.G.C - SEAMLESS INNER GROOVE COPPER

## CEILING CASSETTE C SERIES (COOLING ONLY)

MODEL		INDOOR UNIT		MCK010C		MCK015C		MCK020C			
		OUTDOOR UNIT		MLC010B		MLC015B		MLC020B			
NOMINAL COOLING CAPACITY				kcal/h	2392	3150		4920			
				W	2782	3660		5720			
				Btu/h	9500	12500		19500			
NOMINAL TOTAL POWER				W	895	1392		2174			
NOMINAL TOTAL CURRENT				A	3.80	6.20		10.60			
INDOOR UNIT	POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50						
	REFRIGERANT / CONTROL				R22 / CAPILLARY TUBE IN OUTDOOR						
	FAN	AIR FLOW			cfm / L/s	410/ 194		410/ 194		450/ 212	
		FAN MOTOR				6 POLES x 16W		6 POLES x 18W		6 POLES x 22W	
		RATED INPUT POWER			W	56		63		74	
		RATED RUNNING CURRENT			A	0.24		0.28		0.31	
	COIL	TUBE	MATERIAL		S.I.G.C						
			DIAMETER	mm/in	9.52/ 3/8				7/ 0.276		
			THICKNESS	mm/in	0.35 / 0.014		0.32 / 0.013				
		FIN	MATERIAL		ALUMINIUM (SLIT FIN )						
			THICKNESS	mm/in	0.11 / 0.0043						
			ROW			1		2			
		FIN PER INCH		20							
		FACE AREA			m <sup>2</sup> /ft <sup>2</sup>	0.318/ 3.42					
	DIMENSION ( ) - WITH PANEL	HEIGHT		mm/in	250 (295) / 9.8 (11.6)						
		WIDTH		mm/in	570 (640) / 22.4 (25.2)						
		DEPTH		mm/in	570 (640) / 22.4 (25.2)						
	WEIGHT ( UNIT + PANEL)			kg	22 + 2		23 + 2				
	SOUND PRESSURE LEVEL			dBA	43		45		46		
	CONTROL	ROOM TEMPERATURE			MICROCOMPUTER CONTROLLED THERMOSTAT						
		AIR DISCHARGE			4 WAY AUTOMATIC LOUVER (UP & DOWN)						
		OPERATION			WIRELESS OR LED WIRED MICROCOMPUTER REMOTE CONTROL						
	CONDENSATE DRAIN SIZE			mm/in	19.05 / 3/4						
	AIR FILTER				CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)						
	PACKING	HEIGHT	mm/in	317 (127) / 12.5 (5)							
	DIMENSION ( ) - PANEL	WIDTH	mm/in	630 (700) / 24.8 (27.6)							
		DEPTH	mm/in	630 (700) / 24.8 (27.6)							
OUTDOOR UNIT	COMPRESSOR	POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50					
		COMPRESSOR TYPE				ROTARY HERMETIC					
		CAPACITOR			µF	30		45			
		LOCK ROTOR AMP.			A	20		25		56	
		RATED RUNNING CURRENT			A	3.4		5.7		9.8	
		RATED INPUT POWER			W	791		1273		1990	
	FAN	PROTECTION DEVICE				OVERLOAD PROTECTION					
		POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50					
		FAN TYPE / DRIVE				PROPELLER / DIRECT					
		BLADE MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN					
		DIAMETER			mm/in	355 / 14			420/ 16		
		RATED RUNNING CURRENT			A	0.21		0.25		0.47	
		MOTOR OUTPUT		W	20		25		80		
		RATED INPUT POWER		W	48		56		110		
	COIL	TUBE	MATERIAL		S.I.G.C						
DIAMETER			mm/in	9.52 / 3/8							
THICKNESS			mm/in	0.35 / 0.014							
FIN		MATERIAL		ALUMINIUM (SLIT FIN )							
		THICKNESS	mm/in	0.127 / 0.005							
		ROW			1			2			
FIN PER INCH				18		19		14			
FACE AREA			m <sup>2</sup> /ft <sup>2</sup>	0.32 / 3.5		0.51 / 5.53					
DIMENSION	HEIGHT		mm/in	494 / 19.4			646 / 25.4				
	WIDTH		mm/in	740 / 29.1			840 / 33.1				
	DEPTH		mm/in	270 / 10.6			330 / 13.0				
WEIGHT			kg	31		34		57			
SOUND PRESSURE LEVEL			dBA	48		49		52			
CASING	MATERIAL		GALVANISED MILD STEEL								
	THICKNESS		mm/in	0.8 / 0.031							
	FINISHING		POLYESTER POWDER								
PIPE	TYPE		FLARE VALVE								
	SIZE				6.35/ 1/4						
	LIQUID		mm/in	9.52/ 3/8			12.70/ 1/2				
PACKING DIMENSION	GAS		mm/in	558 / 22.0			710 / 28.0				
	HEIGHT		mm/in	851 / 33.5			957 / 37.7				
	WIDTH		mm/in	401 / 15.8			461 / 18.1				

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

### Abbreviation

S.B.C. - SEAMLESS BARE COPPER  
S.I.G.C - SEAMLESS INNER GROOVE COPPER



## CEILING CASSETTE C SERIES (HEAT PUMP)

MODEL		INDOOR UNIT		MCK010CR		MCK015CR		MCK020CR			
		OUTDOOR UNIT		MLC010BR		MLC015BR		MLC020BR			
NOMINAL COOLING CAPACITY		kcal/h		2390		3150		4540			
		W		2780		3660		5280			
		Btu/h		9500		12500		18000			
NOMINAL HEATING CAPACITY		kcal/h		2390		3080		4610			
		W		2780		3580		5360			
		Btu/h		9500		12200		18300			
NOMINAL TOTAL POWER (COOLING)		W		914		1436		2050			
NOMINAL TOTAL POWER (HEATING)		W		874		1164		2090			
NOMINAL TOTAL CURRENT (COOLING)		A		3.9		6.3		10.0			
NOMINAL TOTAL CURRENT (HEATING)		A		3.7		5.3		10.3			
INDOOR UNIT	POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50						
	REFRIGERANT / CONTROL			R22 / CAPILLARY TUBE IN OUTDOOR							
	FAN	AIR FLOW		cfm / L/s		410/ 194		410/ 194		450/ 212	
		FAN MOTOR				6 POLES x 16W		6 POLES x 18W		6 POLES x 22W	
		RATED INPUT POWER		W		56		63		74	
		RATED RUNNING CURRENT		A		0.24		0.28		0.31	
	COIL	TUBE	MATERIAL		S.I.G.C						
			DIAMETER		mm/in		9.52/ 3/8		7/ 0.276		
		THICKNESS		mm/in		0.35 / 0.014		0.32 / 0.013			
		FIN	MATERIAL		ALUMINIUM (SLIT FIN )						
			THICKNESS		mm/in		0.11 / 0.0043				
		ROW				1		2			
		FIN PER INCH				20					
		FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.318/ 3.42					
	DIMENSION ( ) - WITH PANEL	HEIGHT		mm/in		250 (295) / 9.8 (11.6)					
		WIDTH		mm/in		570 (640) / 22.4 (25.2)					
		DEPTH		mm/in		570 (640) / 22.4 (25.2)					
	WEIGHT ( UNIT + PANEL )		kg		22 + 2		23 + 2				
	SOUND PRESSURE LEVEL		dBA		43		45		46		
	CONTROL	ROOM TEMPERATURE			MICROCOMPUTER CONTROLLED THERMOSTAT						
		AIR DISCHARGE OPERATION			4 WAY AUTOMATIC LOUVER (UP & DOWN) WIRELESS OR LED WIRED MICROCOMPUTER REMOTE CONTROL						
	CONDENSATE DRAIN SIZE			mm/in		19.05 / 3/4					
	AIR FILTER				CORRUGATED WASHABLE SARAN NET (OPTIONAL IONIZER FILTER)						
	PACKING DIMENSION ( ) - PANEL	HEIGHT		mm/in		317 (127) / 12.5 (5)					
		WIDTH		mm/in		630 (700) / 24.8 (27.6)					
DEPTH		mm/in		630 (700) / 24.8 (27.6)							
OUTDOOR UNIT	POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50						
	COMPRESSOR TYPE			ROTARY HERMETIC							
	COMPRESSOR	CAPACITOR		µF		30		45			
		LOCK ROTOR AMP.		A		20		25		20	
		RATED RUNNING CURRENT (COOLING)		A		3.4		5.8		9.3	
		RATED RUNNING CURRENT (HEATING)		A		3.3		4.8		9.5	
		RATED INPUT POWER (COOLING)		W		810		1317		1866	
		RATED INPUT POWER (HEATING)		W		770		1045		1906	
	PROTECTION DEVICE			OVERLOAD PROTECTION							
	FAN	POWER SOURCE		V/Ph/Hz		220 - 240 / 1 / 50					
		FAN TYPE / DRIVE			PROPELLER / DIRECT						
		BLADE MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN						
		DIAMETER		mm/in		355 / 14		420/ 16			
		RATED RUNNING CURRENT		A		0.21		0.25		0.47	
		MOTOR OUTPUT		W		20		25		80	
		RATED INPUT POWER		W		48		56		110	
	COIL	TUBE	MATERIAL		S.I.G.C						
			DIAMETER		mm/in		9.52 / 3/8		S.B.C		
		THICKNESS		mm/in		0.35 / 0.014					
		FIN	MATERIAL		ALUMINIUM (SLIT FIN )						
			THICKNESS		mm/in		0.127 / 0.005				
		ROW				1		2			
		FIN PER INCH				18		19		14	
		FACE AREA		m <sup>2</sup> /ft <sup>2</sup>		0.32 / 3.5		0.51 / 5.53			
	DIMENSION	HEIGHT		mm/in		494 / 19.4				646 / 25.4	
WIDTH		mm/in		740 / 29.1				840 / 33.1			
DEPTH		mm/in		270 / 10.6				330 / 13.0			
WEIGHT		kg		31		34		57			
SOUND PRESSURE LEVEL		dBA		48		49		52			
CASING	MATERIAL			GALVANISED MILD STEEL							
	THICKNESS		mm/in		0.8 / 0.031						
	FINISHING			POLYESTER POWDER							
PIPE	TYPE			FLARE VALVE							
	SIZE		mm/in		6.35/ 1/4						
PACKING DIMENSION	LIQUID GAS		mm/in		9.52/ 3/8		12.70/ 1/2		15.88 / 5/8		
	HEIGHT		mm/in		558 / 22.0				710 / 28.0		
	WIDTH		mm/in		851 / 33.5				957 / 37.7		
DEPTH		mm/in		401 / 15.8				461 / 18.1			

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR  
b) HEATING - 21.1°C DB / 15.6°C WB INDOOR AND 8.3°C DB / 6.1°C WB OUTDOOR

### Abbreviation

S.B.C. - SEAMLESS BARE COPPER  
S.I.G.C - SEAMLESS INNER GROOVE COPPER

# Noise Level

## MCK – A/AR

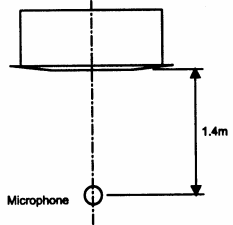
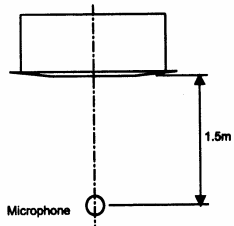
Model	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall A (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
MCK020A/AR	High	46	45	40	38	32	21	14	42	37
	Medium	44	43	37	33	28	18	12	39	32
	Low	43	42	35	31	26	17	11	37	31
MCK025A/AR	High	48	46	43	39	33	27	19	45	38
	Medium	45	43	40	35	29	21	15	42	35
	Low	43	42	38	32	27	19	14	40	33
MCK030A/AR	High	50	48	47	43	37	35	28	49	42
	Medium	48	45	43	38	32	31	27	45	38
	Low	46	43	41	35	30	30	26	43	36
MCK040A/AR	High	50	49	49	46	39	38	31	51	45
	Medium	48	47	47	43	36	34	25	48	42
	Low	46	45	46	41	34	30	23	46	41
MCK050A/AR	High	54	52	51	48	43	42	34	53	47
	Medium	52	50	50	46	41	40	32	52	46
	Low	51	49	49	45	39	39	31	50	45

## MCK – B/BR

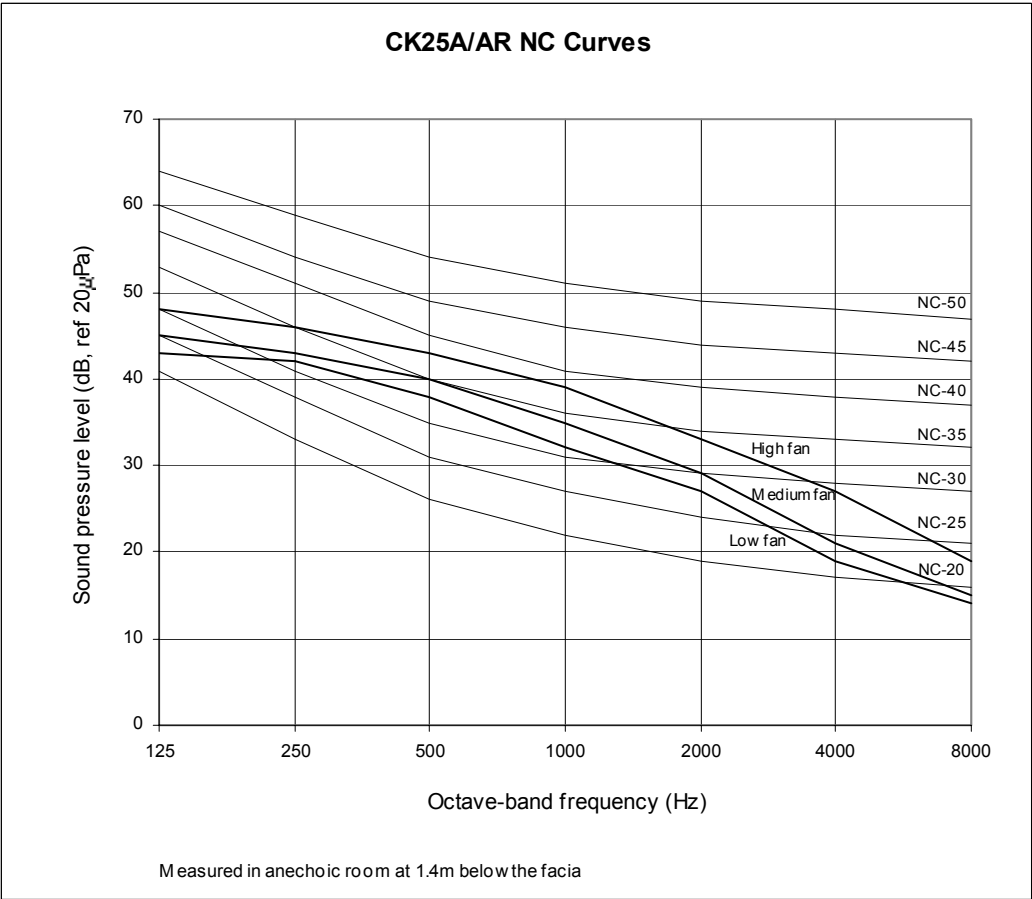
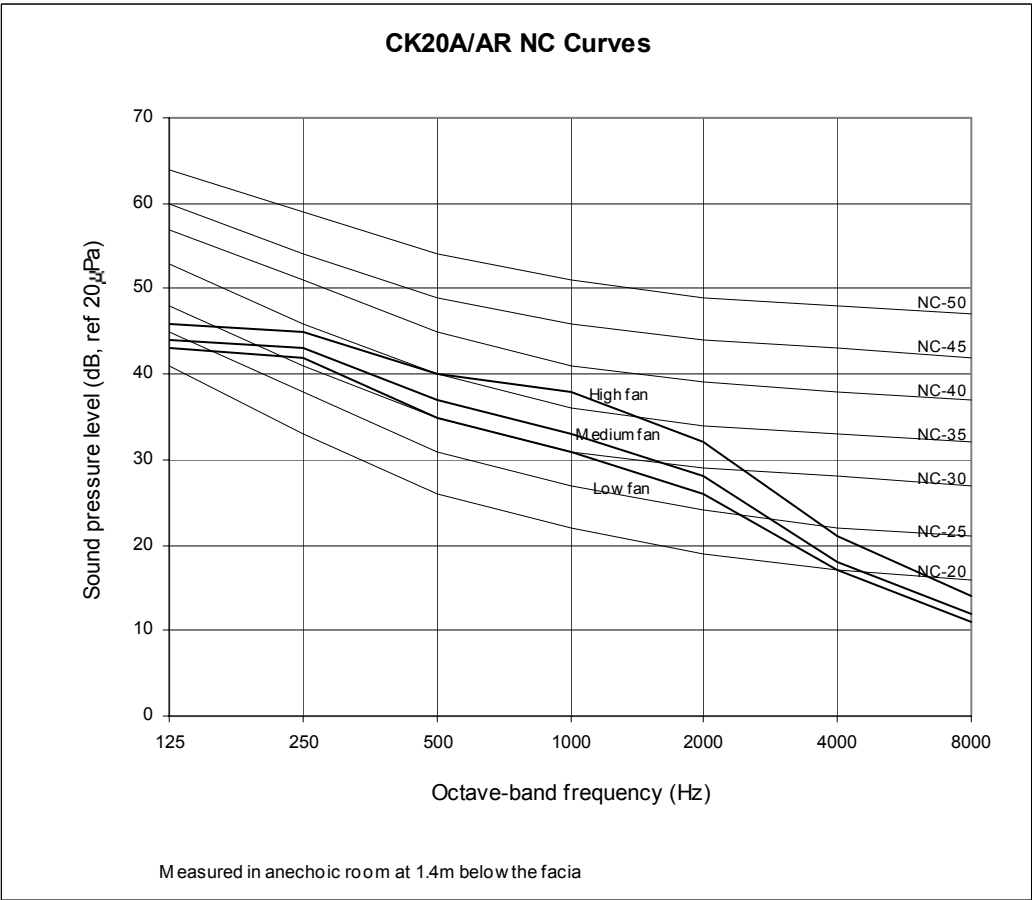
Model	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall A (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
MCK015B/BR	High	41	42	42	34	30	23	13	41	37
	Medium	40	40	39	30	28	17	10	38	34
	Low	38	39	38	29	27	15	8	36	33
MCK020B/BR	High	42	43	43	35	31	24	14	42	38
	Medium	40	42	41	34	30	23	12	40	36
	Low	39	40	38	29	28	15	9	37	33
MCK025B/BR	High	47	45	46	38	34	28	17	45	41
	Medium	42	43	43	35	31	24	14	42	38
	Low	40	41	40	32	30	20	11	39	35
MCK030B/BR	High	50	47	48	42	36	32	20	48	43
	Medium	47	45	46	38	34	28	17	45	41
	Low	42	43	43	35	31	24	14	42	38

## MCK – C/CR

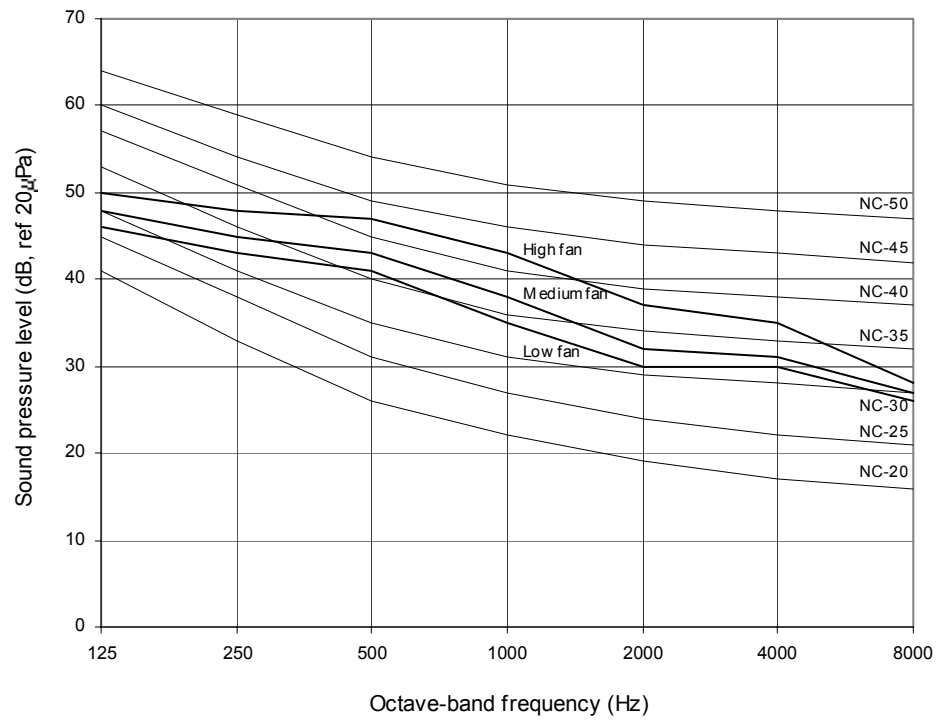
Model	Speed	1/1 Octave Sound Pressure Level (dB, ref 20μPa)							Overall A (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
MCK010C/CR	High	43	46	43	40	33	30	20	44	39
	Medium	42	44	42	39	32	28	19	43	38
	Low	41	43	40	37	30	25	17	42	36
MCK015C/CR	High	45	43	42	39	34	30	19	44	38
	Medium	44	42	40	38	33	28	17	42	37
	Low	43	41	39	36	31	25	16	41	35
MCK020C/CR	High	46	46	45	42	36	38	26	47	41
	Medium	45	46	43	41	35	37	23	46	40
	Low	43	44	42	39	33	35	20	44	38

Model	Measuring location
MCK020A/AR MCK025A/AR MCK015B/BR MCK020B/BR MCK025B/BR MCK010C/CR MCK015C/CR MCK020C/CR	<u>Standard : JIS C 9612</u> 
MCK030A/AR MCK040A/AR MCK050A/AR MCK030B/BR	<u>Standard : JIS B 8615</u> 

**NC Curves**

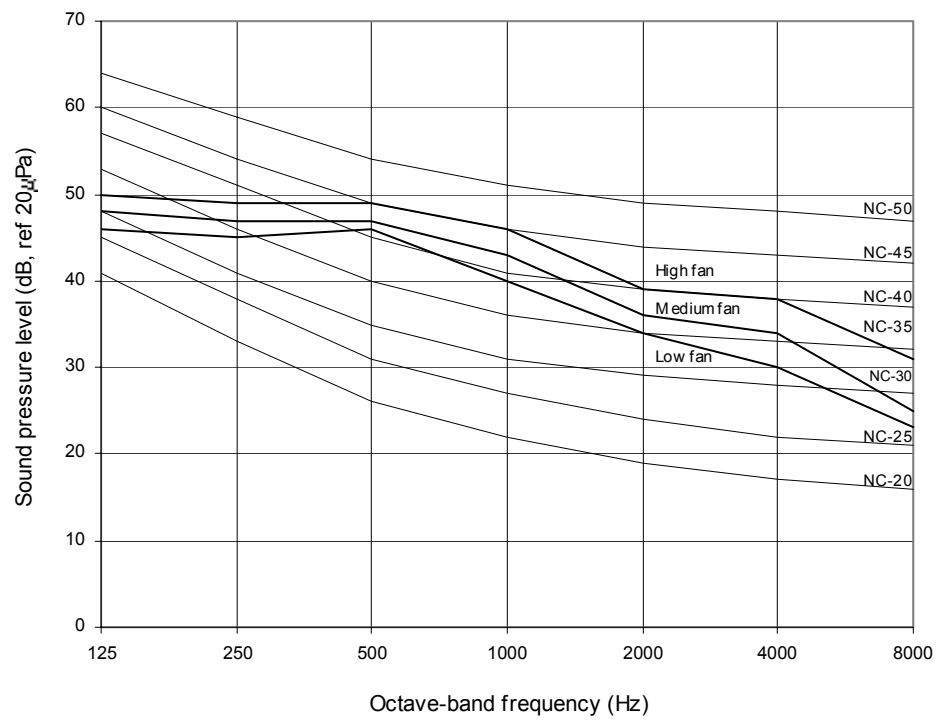


### CK30A/AR NC Curves



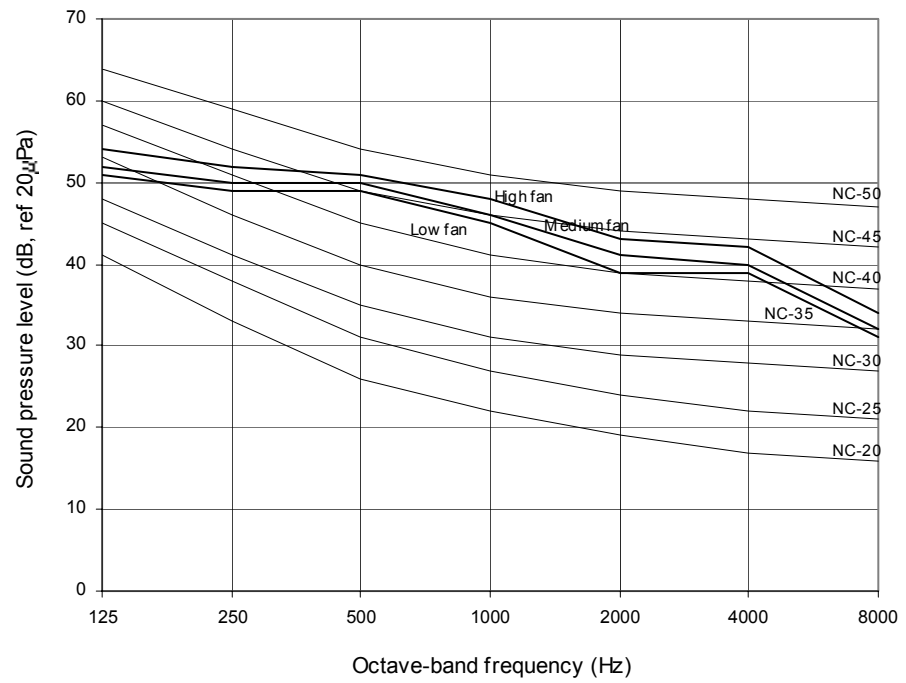
Measured in anechoic room at 1.5m below the facia

### CK40A/AR NC Curves



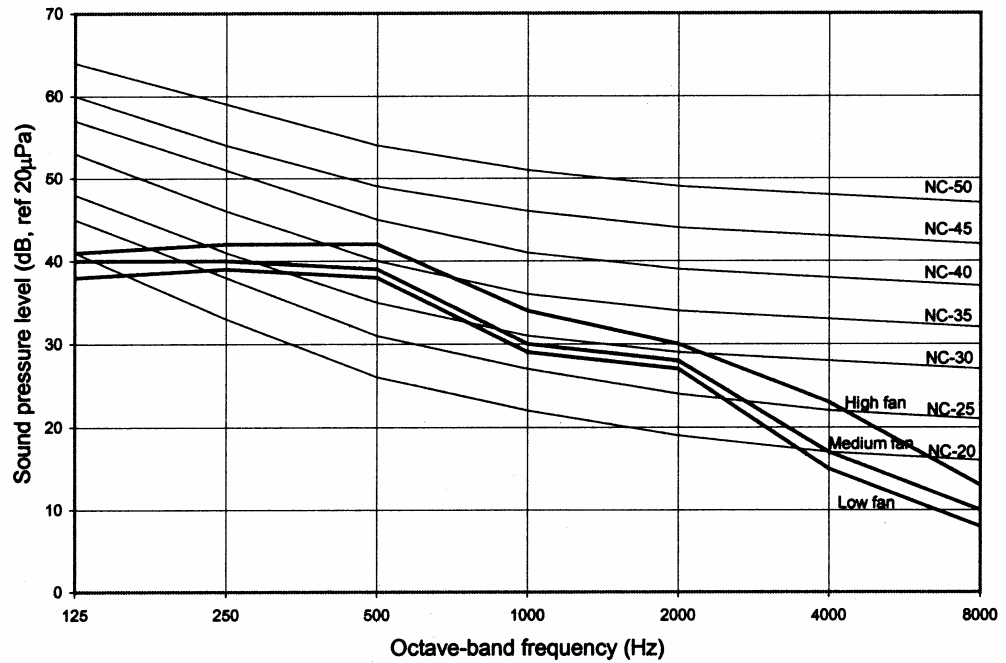
Measured in anechoic room at 1.5m below the facia

### CK50A/AR NC Curves



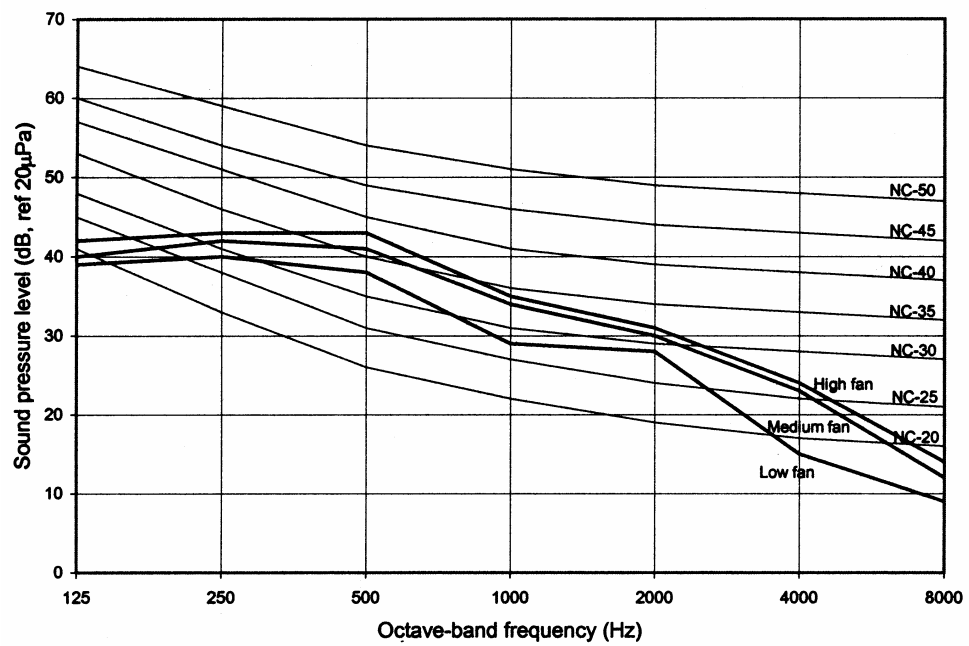
Measured in anechoic room at 1.5m below the fascia

CK15B/BR NC Curves



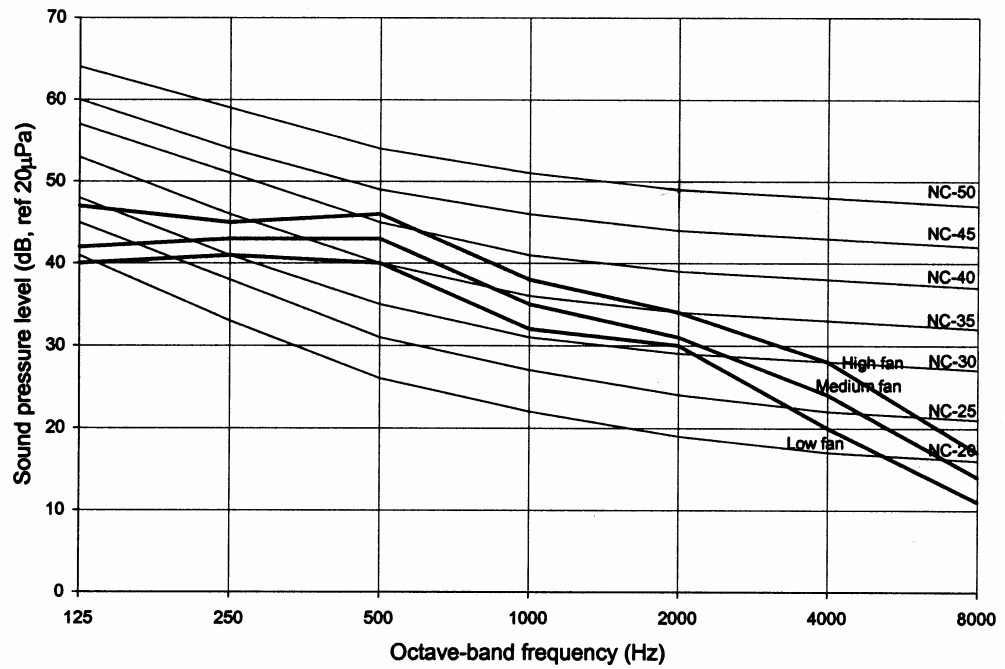
Measured in anechoic room at 1.4m below the fascia

CK20B/BR NC Curves

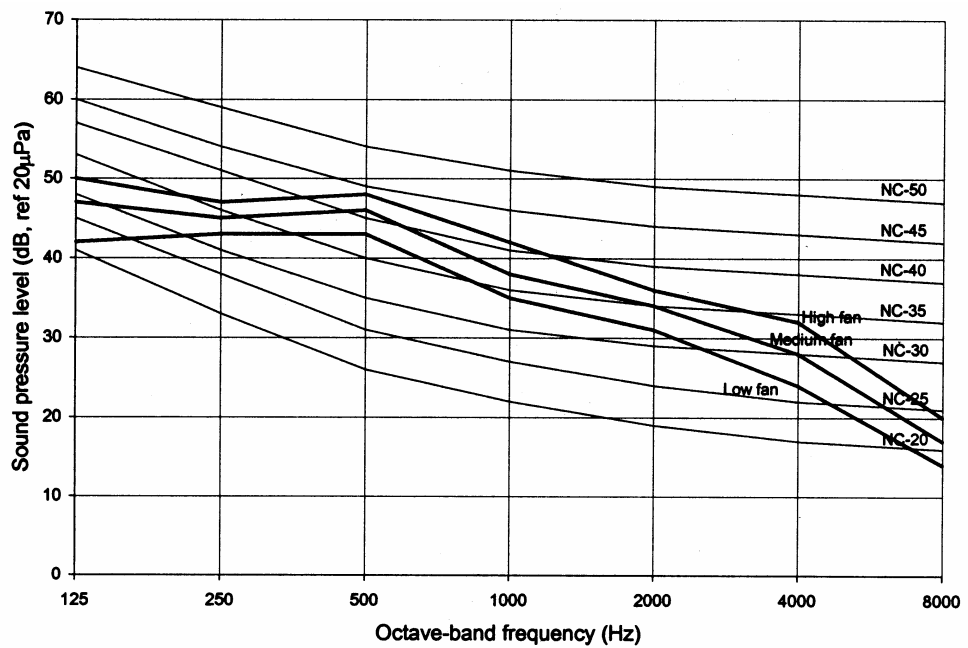


Measured in anechoic room at 1.4m below the fascia

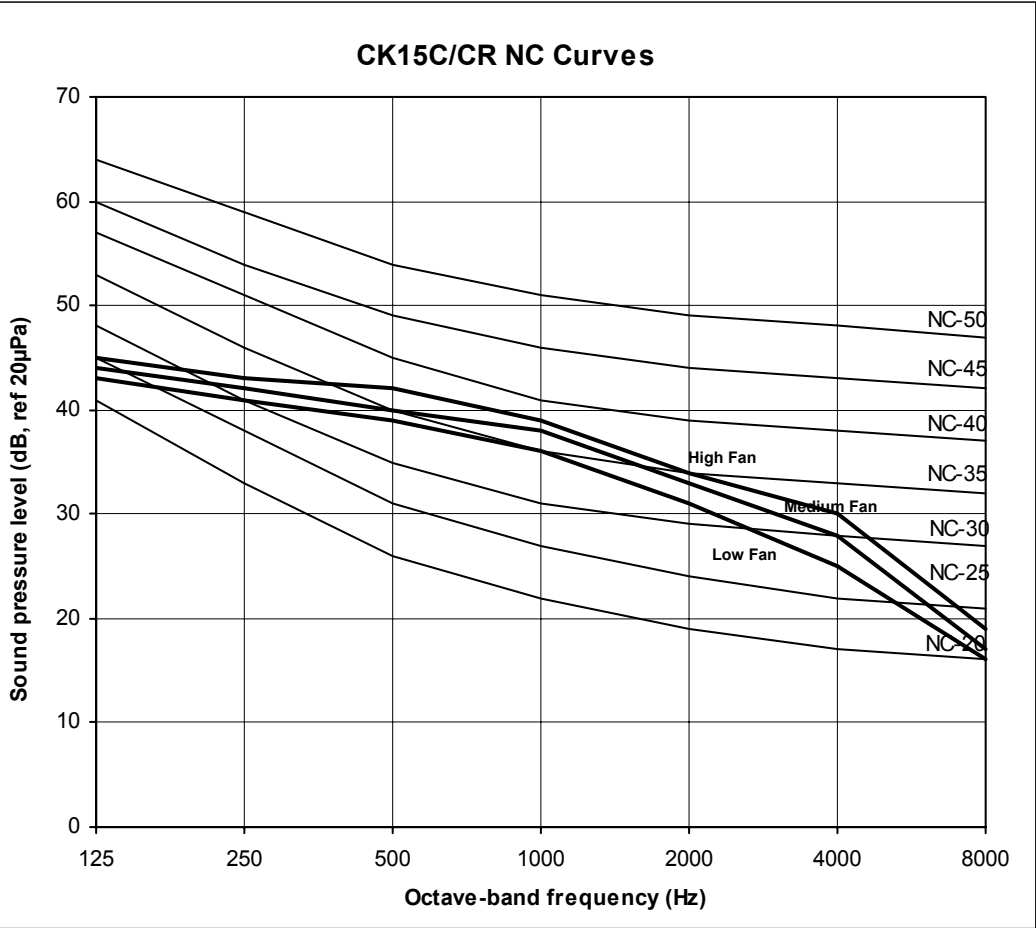
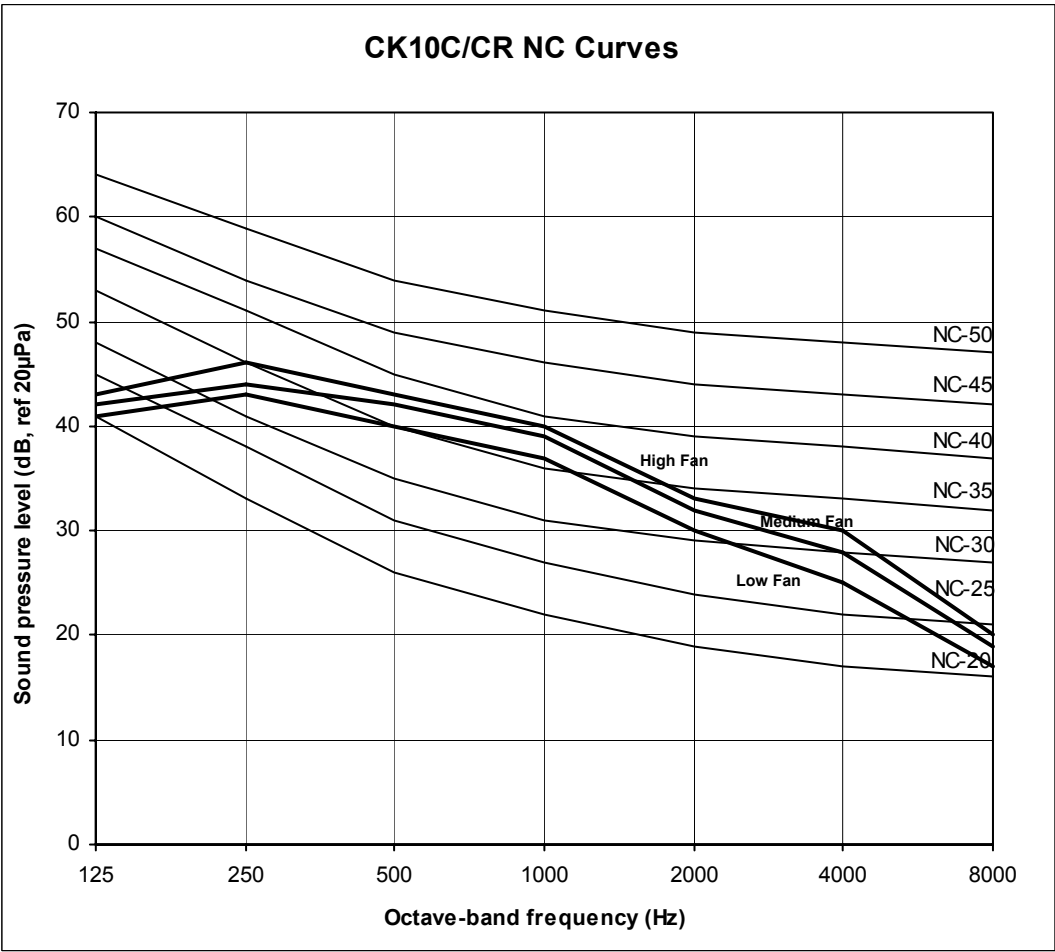
CK25B/BR NC Curves

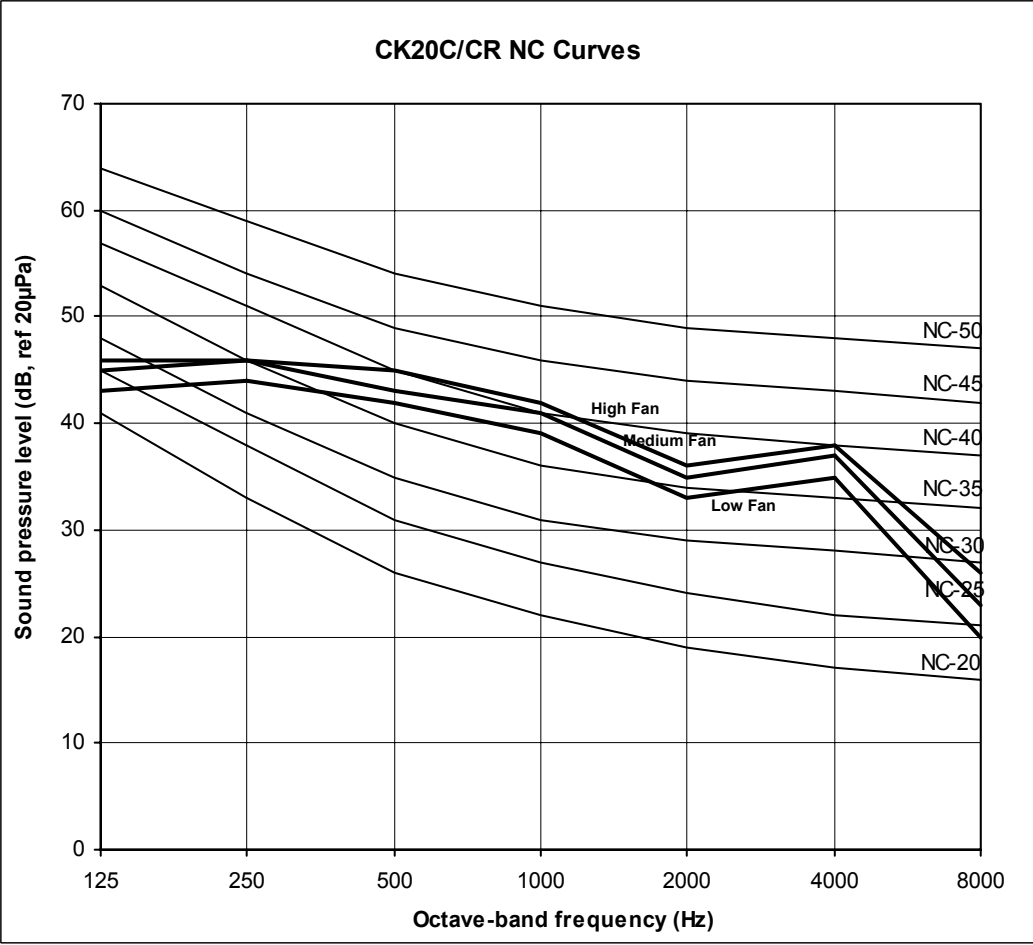


CK30B/BR NC Curves







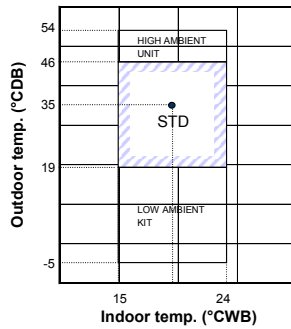


# Operating Range

Ensure the operating temperature is in allowable range.

## Cooling only

### Cooling

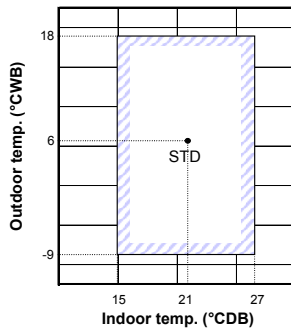


### **Caution :**

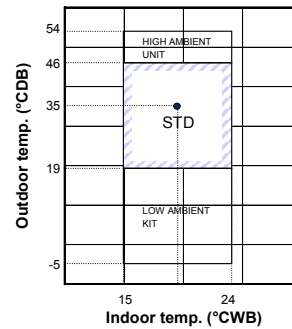
The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

## Heat pump

### Heating



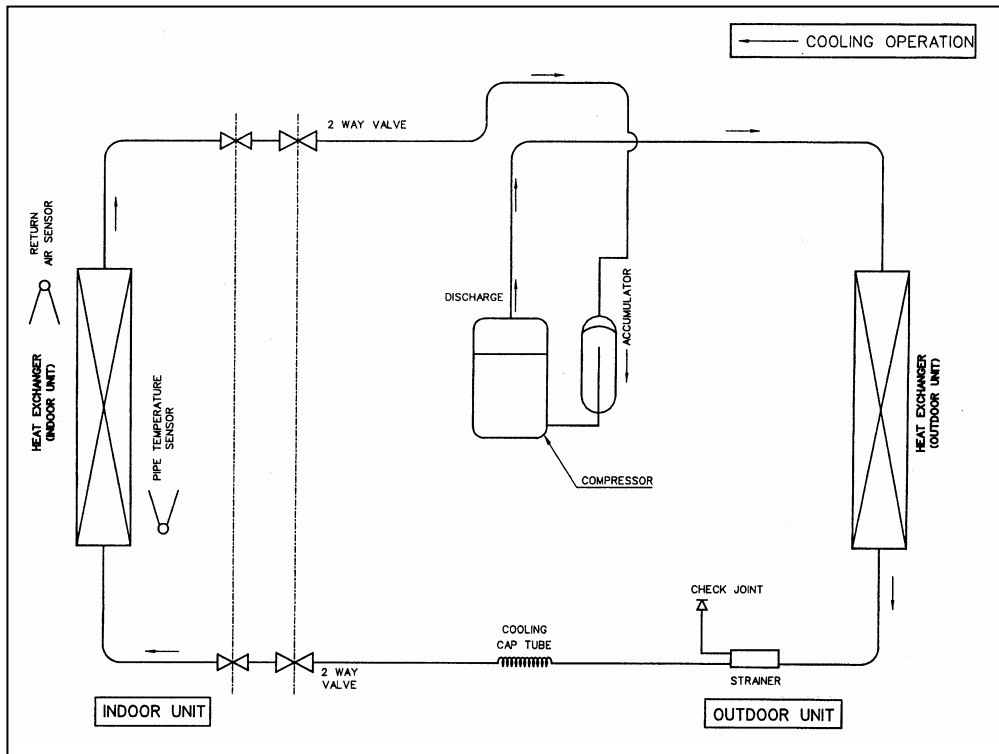
### Cooling



# Refrigerant Circuit

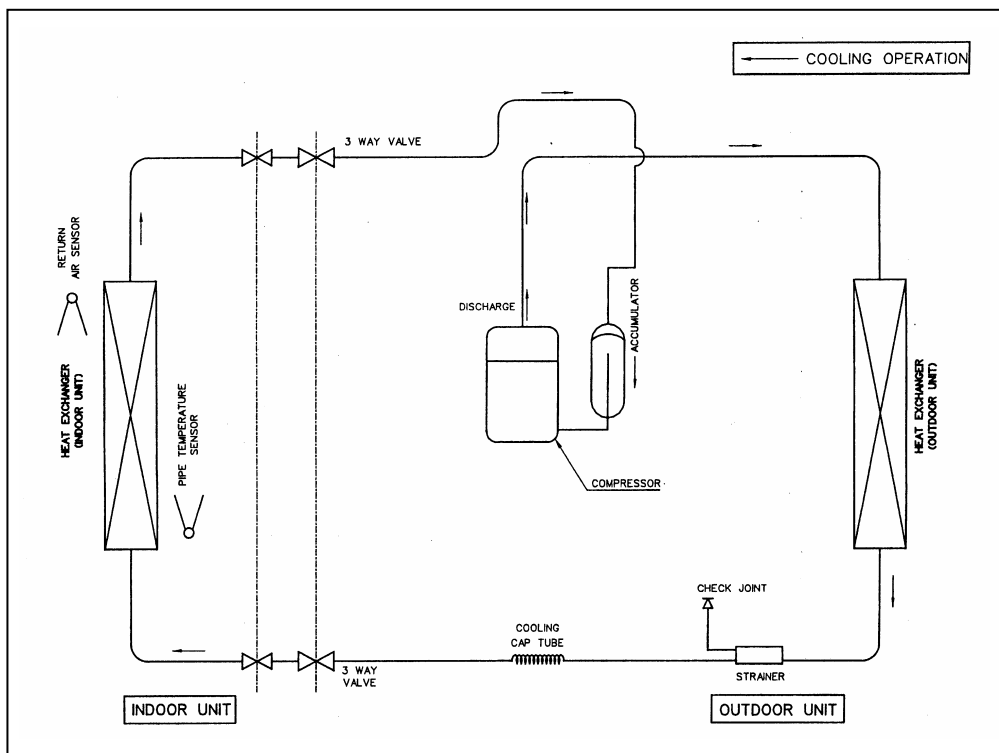
Model : MCK015B – MLC/ M4LC015B  
MCK020A – MLC/ M4LC020B  
MCK020B – MLC/ M4LC020B

MCK010C – MLC010B  
MCK015C – MLC015B  
MCK020C – MLC020B



Model : MCK025A – MLC/ M4LC025B  
MCK030A – MLC030B

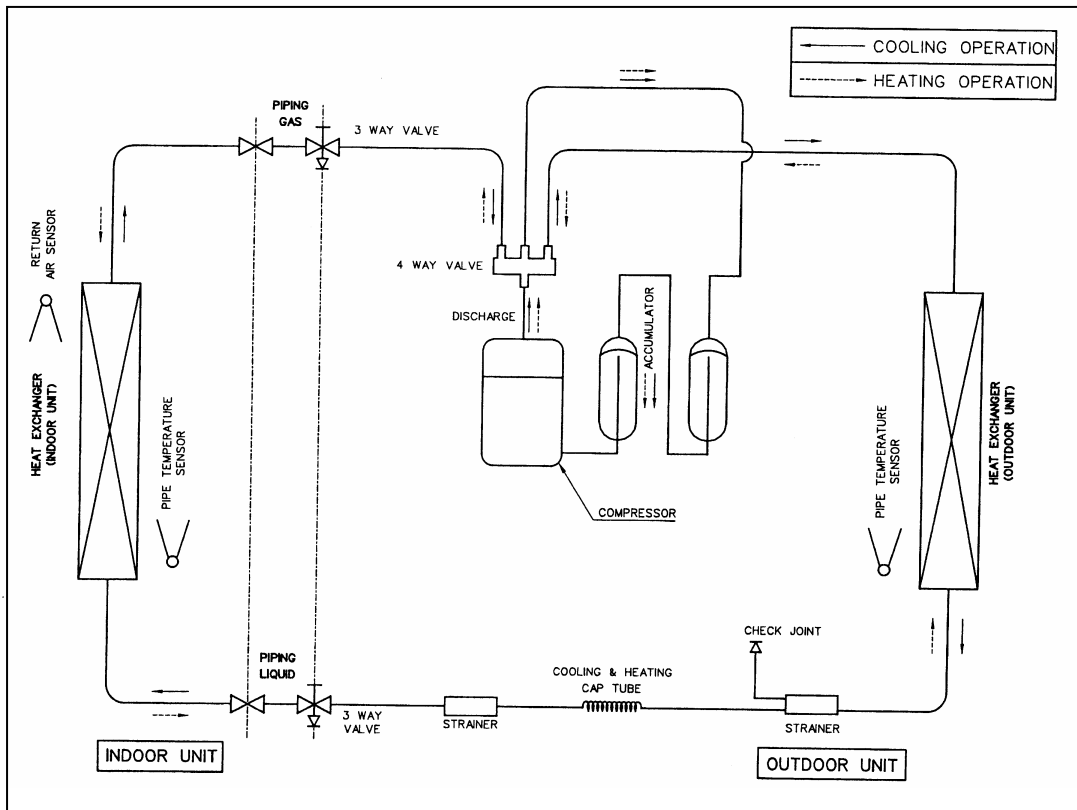
MCK025B – MLC/ M4LC025B  
MCK030B – MLC030B





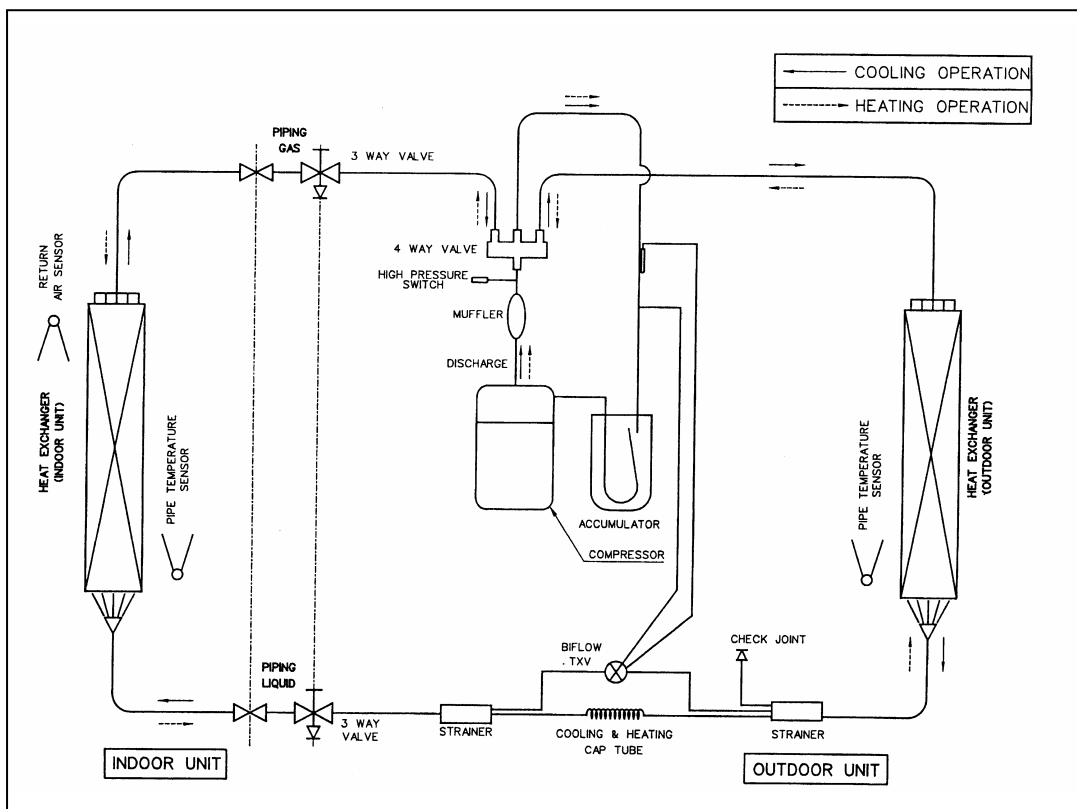
Model : MCK025AR – MLC/ M4LC025BR  
MCK030AR – MLC030BR

MCK025BR – MLC/ M4LC025BR  
MCK030BR – MLC030BR



Model : MCK030AR – MLC/ M4LC030CR  
MCK040AR – MLC035CR  
MCK040AR – MLC/ M4LC040CR  
MCK050AR – MLC/ M4LC050CR

MCK030BR – MLC/ M4LC030CR



# Performance Table

## A Series (Cooling Only – R22)

Model : MCK020A / MLC020B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	5.669	5.396	5.152	4.907	4.441	4.119	3.963	3.903	3.855
		SC	5.669	5.396	5.152	4.907	4.441	4.119	3.963	3.903	3.855
	15	TC	5.897	5.632	5.394	5.157	4.667	4.329	4.165	4.102	4.051
		SC	5.586	5.314	5.071	4.828	4.369	4.053	3.899	3.840	3.792
	18	TC	6.519	6.274	6.056	5.837	5.283	4.9	4.715	4.643	4.585
		SC	5.358	5.09	4.85	4.611	4.173	3.87	3.724	3.667	3.622
	19.4	TC	6.809	6.574	6.365	6.155	5.571	5.167	4.971	4.895	4.835
		SC	5.252	4.986	4.747	4.509	4.081	3.785	3.642	3.587	3.542
	20	TC	6.934	6.681	6.456	6.231	5.639	5.23	5.032	4.956	4.894
		SC	5.207	4.924	4.671	4.419	3.999	3.709	3.569	3.515	3.471
	22	TC	7.348	7.038	6.761	6.484	5.868	5.443	5.237	5.157	5.093
		SC	5.055	4.718	4.418	4.117	3.726	3.456	3.325	3.275	3.234
	24	TC	7.763	7.395	7.066	6.737	6.097	5.655	5.441	5.358	5.292
		SC	4.903	4.513	4.164	3.815	3.453	3.203	3.082	3.035	2.997
									HIGH AMBIENT		

Model : MCK025A / MLC025B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	6.736	6.413	6.125	5.837	5.657	5.369	5.231	5.178	5.136
		SC	6.736	6.413	6.125	5.837	5.657	5.369	5.231	5.178	5.136
	15	TC	7.385	6.936	6.535	6.135	5.946	5.644	5.499	5.443	5.399
		SC	6.678	6.335	6.028	5.721	5.545	5.263	5.128	5.076	5.035
	18	TC	9.153	8.362	7.655	6.948	6.734	6.391	6.227	6.164	6.114
		SC	6.520	6.120	5.763	5.405	5.239	4.973	4.845	4.796	4.757
	19.4	TC	9.979	9.027	8.177	7.327	7.101	6.740	6.567	6.501	6.448
		SC	6.446	6.020	5.639	5.258	5.096	4.837	4.713	4.665	4.627
	20	TC	10.333	9.353	8.478	7.604	7.369	6.995	6.815	6.746	6.691
		SC	6.415	5.971	5.575	5.179	5.019	4.764	4.642	4.595	4.558
	22	TC	11.512	10.440	9.482	8.525	8.262	7.842	7.641	7.564	7.502
		SC	6.309	5.809	5.362	4.915	4.763	4.521	4.405	4.360	4.325
	24	TC	12.691	11.526	10.486	9.446	9.155	8.690	8.467	8.381	8.313
		SC	6.204	5.646	5.148	4.650	4.507	4.278	4.168	4.126	4.092
								HIGH AMBIENT			

Model : MCK030A / MLC030C

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	8.487	8.015	7.593	7.171	6.827	6.468	6.189	6.037	5.877
		SC	8.487	8.015	7.593	7.171	6.827	6.468	6.189	6.037	5.877
	15	TC	9.047	8.490	7.993	7.495	7.136	6.761	6.469	6.310	6.143
		SC	8.036	7.632	7.272	6.912	6.581	6.235	5.965	5.819	5.665
	18	TC	10.574	9.786	9.083	8.380	7.978	7.559	7.232	7.055	6.868
		SC	6.805	6.590	6.398	6.206	5.908	5.598	5.356	5.225	5.086
	19.4	TC	11.286	10.391	9.592	8.792	8.371	7.931	7.588	7.402	7.206
		SC	6.230	6.103	5.990	5.876	5.595	5.301	5.072	4.947	4.816
	20	TC	11.592	10.675	9.856	9.038	8.604	8.152	7.800	7.609	7.407
		SC	5.984	5.863	5.756	5.648	5.377	5.095	4.875	4.755	4.629
	22	TC	12.610	11.621	10.738	9.856	9.383	8.890	8.506	8.297	8.078
		SC	5.163	5.064	4.975	4.887	4.652	4.408	4.217	4.114	4.005
	24	TC	13.627	12.567	11.620	10.673	10.161	9.627	9.212	8.986	8.748
		SC	4.342	4.264	4.195	4.125	3.927	3.721	3.560	3.473	3.381
									HIGH AMBIENT		

**Model : MCK030A / MLC030B**

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	8.385	7.868	7.407	6.946	6.484	5.931
		SC	8.385	7.868	7.407	6.946	6.484	5.931
	15	TC	8.828	8.253	7.740	7.227	6.714	6.098
		SC	7.984	7.527	7.119	6.712	6.304	5.814
	18	TC	10.034	9.302	8.648	7.995	7.341	6.556
		SC	6.890	6.597	6.335	6.073	5.811	5.497
	19.4	TC	10.597	9.792	9.072	8.353	7.633	6.770
		SC	6.380	6.163	5.969	5.775	5.581	5.348
	20	TC	10.839	10.020	9.290	8.559	7.828	6.952
		SC	6.161	5.950	5.762	5.574	5.386	5.160
	22	TC	11.643	10.783	10.014	9.246	8.478	7.556
		SC	5.432	5.243	5.073	4.904	4.735	4.532
	24	TC	12.447	11.545	10.739	9.933	9.128	8.161
		SC	4.703	4.535	4.385	4.234	4.084	3.904

**Model : MCK040A / MLC040C**

Model: MCR040A / MEC040											
Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	11.260	10.642	10.090	9.538	8.734	7.928	7.627	7.547	7.515
		SC	10.648	10.159	9.722	9.285	8.503	7.718	7.425	7.347	7.316
	15	TC	11.857	11.181	10.578	9.975	9.135	8.291	7.976	7.893	7.860
		SC	10.233	9.791	9.396	9.000	8.242	7.481	7.197	7.122	7.092
	18	TC	13.483	12.652	11.909	11.167	10.226	9.282	8.930	8.836	8.799
		SC	9.101	8.786	8.505	8.224	7.531	6.836	6.576	6.508	6.480
	19.4	TC	14.242	13.338	12.531	11.723	10.736	9.744	9.374	9.277	9.237
		SC	8.572	8.317	8.089	7.862	7.199	6.535	6.287	6.221	6.194
	20	TC	14.567	13.636	12.805	11.973	10.964	9.952	9.574	9.474	9.434
		SC	8.346	8.082	7.847	7.612	6.970	6.327	6.087	6.023	5.997
	22	TC	15.652	14.630	13.718	12.806	11.727	10.644	10.240	10.133	10.090
		SC	7.590	7.299	7.038	6.778	6.206	5.633	5.420	5.363	5.340
	24	TC	16.736	15.624	14.631	13.638	12.489	11.336	10.906	10.792	10.746
		SC	6.835	6.515	6.229	5.943	5.443	4.940	4.753	4.703	4.683
									HIGH AMBIENT		

**Model : MCK050A / MLC050C**

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	12.597	12.135	11.723	11.311	10.657	10.058	9.708	9.548	9.398
		SC	11.724	11.446	11.198	10.950	10.317	9.737	9.398	9.243	9.098
	15	TC	13.716	13.093	12.536	11.980	11.287	10.652	10.282	10.113	9.954
		SC	11.185	10.962	10.762	10.562	9.952	9.392	9.065	8.916	8.776
	18	TC	16.770	15.705	14.754	13.803	13.005	12.274	11.847	11.652	11.469
		SC	9.717	9.641	9.572	9.504	8.955	8.451	8.158	8.023	7.897
	19.4	TC	18.195	16.924	15.789	14.654	13.807	13.031	12.578	12.370	12.176
		SC	9.032	9.024	9.017	9.011	8.490	8.013	7.734	7.606	7.487
	20	TC	18.806	17.466	16.269	15.072	14.201	13.402	12.936	12.723	12.523
		SC	8.738	8.712	8.690	8.667	8.166	7.707	7.439	7.316	7.201
	22	TC	20.842	19.271	17.868	16.465	15.513	14.641	14.131	13.899	13.680
		SC	7.759	7.674	7.598	7.522	7.087	6.688	6.456	6.349	6.250
	24	TC	22.878	21.076	19.467	17.857	16.825	15.879	15.327	15.074	14.837
		SC	6.780	6.635	6.506	6.376	6.007	5.670	5.473	5.382	5.298
									HIGH AMBIENT		

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

$$\text{Sensible capacity (EDB)} = \text{Sensible capacity (26.7)} + 1.23 \times \text{L/s} \times (1 - \text{BPF}) \times (\text{EDB} - 26.7) / 1000$$

Where, BPF = Bypass factor

EDB = Entering dry bulb temperature, ° C

	MCK020A MLC020B	MCK025A MLC025B	MCK030A MLC030C	MCK030A MLC030B	MCK040A MLC040C	MCK050A MLC050C
Bypass factor	0.46	0.26	0.31	0.29	0.36	0.31



## A Series (Cooling Only – R407C)

### Model : MCK020A / M4LC020B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	4.940	4.702	4.489	4.276	3.870	3.590	3.454	3.401	3.359
		SC	4.940	4.702	4.489	4.276	3.870	3.590	3.454	3.401	3.359
	15	TC	5.139	4.907	4.701	4.494	4.067	3.772	3.630	3.574	3.53
		SC	4.868	4.631	4.419	4.207	3.808	3.531	3.398	3.346	3.305
	18	TC	5.681	5.468	5.277	5.087	4.604	4.270	4.108	4.046	3.996
		SC	4.670	4.436	4.227	4.018	3.636	3.373	3.245	3.196	3.156
	19.4	TC	5.934	5.729	5.546	5.363	4.854	4.502	4.332	4.266	4.213
		SC	4.577	4.345	4.137	3.929	3.556	3.299	3.174	3.126	3.087
	20	TC	6.042	5.822	5.626	5.430	4.914	4.558	4.385	4.319	4.265
		SC	4.537	4.291	4.071	3.851	3.485	3.232	3.110	3.063	3.025
	22	TC	6.404	6.133	5.892	5.650	5.114	4.743	4.563	4.494	4.438
		SC	4.405	4.112	3.850	3.588	3.247	3.012	2.898	2.854	2.818
	24	TC	6.765	6.444	6.157	5.871	5.313	4.928	4.742	4.669	4.611
		SC	4.273	3.933	3.629	3.325	3.009	2.791	2.685	2.645	2.612
									HIGH AMBIENT		

### Model : MCK025A / M4LC025B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	5.658	5.387	5.145	4.903	4.752	4.510	4.394	4.350	4.314
		SC	5.658	5.387	5.145	4.903	4.752	4.510	4.394	4.350	4.314
	15	TC	6.203	5.826	5.489	5.153	4.994	4.740	4.619	4.572	4.535
		SC	5.610	5.321	5.063	4.805	4.657	4.421	4.307	4.264	4.229
	18	TC	7.689	7.024	6.430	5.836	5.656	5.369	5.231	5.178	5.136
		SC	5.477	5.141	4.841	4.540	4.401	4.177	4.070	4.028	3.996
	19.4	TC	8.382	7.582	6.868	6.155	5.965	5.662	5.516	5.461	5.416
		SC	5.415	5.057	4.737	4.417	4.281	4.063	3.959	3.919	3.887
	20	TC	8.679	7.856	7.121	6.387	6.190	5.875	5.724	5.667	5.620
		SC	5.388	5.016	4.683	4.350	4.216	4.002	3.899	3.860	3.828
	22	TC	9.670	8.769	7.965	7.161	6.940	6.587	6.418	6.353	6.302
		SC	5.300	4.879	4.504	4.128	4.001	3.798	3.700	3.663	3.633
	24	TC	10.660	9.682	8.808	7.935	7.690	7.299	7.112	7.040	6.983
		SC	5.211	4.743	4.324	3.906	3.786	3.593	3.501	3.466	3.437
									HIGH AMBIENT		

### Model : MCK030A / M4LC030C

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	8.487	8.015	7.593	7.171	6.827	6.468	6.189	6.037	5.877
		SC	8.487	8.015	7.593	7.171	6.827	6.468	6.189	6.037	5.877
	15	TC	9.047	8.49	7.993	7.495	7.136	6.761	6.469	6.310	6.143
		SC	8.036	7.632	7.272	6.912	6.581	6.235	5.965	5.819	5.665
	18	TC	10.574	9.786	9.083	8.38	7.978	7.559	7.232	7.055	6.868
		SC	6.805	6.59	6.398	6.206	5.908	5.598	5.356	5.225	5.086
	19.4	TC	11.286	10.391	9.592	8.792	8.371	7.931	7.588	7.402	7.206
		SC	6.23	6.103	5.99	5.876	5.595	5.301	5.072	4.947	4.816
	20	TC	11.592	10.675	9.856	9.038	8.604	8.152	7.8	7.609	7.407
		SC	5.984	5.863	5.756	5.648	5.377	5.095	4.875	4.755	4.629
	22	TC	12.61	11.621	10.738	9.856	9.383	8.89	8.506	8.297	8.078
		SC	5.163	5.064	4.975	4.887	4.652	4.408	4.217	4.114	4.005
	24	TC	13.627	12.567	11.62	10.673	10.161	9.627	9.212	8.986	8.748
		SC	4.342	4.264	4.195	4.125	3.927	3.721	3.56	3.473	3.381
									HIGH AMBIENT		

**Model : MCK040A / M4LC040C**

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	10.697	10.11	9.585	9.061	8.298	7.532	7.246	7.170	7.139
		SC	10.116	9.651	9.236	8.821	8.078	7.332	7.053	6.980	6.95
	15	TC	11.264	10.622	10.049	9.476	8.678	7.877	7.578	7.499	7.467
		SC	9.722	9.301	8.926	8.55	7.83	7.107	6.837	6.766	6.737
	18	TC	12.809	12.019	11.314	10.609	9.715	8.818	8.483	8.395	8.359
		SC	8.646	8.347	8.08	7.813	7.155	6.494	6.247	6.183	6.156
	19.4	TC	13.53	12.671	11.904	11.137	10.199	9.257	8.906	8.813	8.775
		SC	8.143	7.901	7.685	7.469	6.839	6.208	5.972	5.910	5.885
	20	TC	13.839	12.954	12.164	11.374	10.416	9.454	9.095	9.001	8.962
		SC	7.928	7.678	7.454	7.231	6.622	6.01	5.782	5.722	5.697
	22	TC	14.869	13.899	13.032	12.165	11.14	10.112	9.728	9.627	9.585
		SC	7.211	6.934	6.686	6.439	5.896	5.352	5.149	5.095	5.073
	24	TC	15.899	14.843	13.9	12.956	11.865	10.769	10.36	10.252	10.208
		SC	6.494	6.189	5.918	5.646	5.171	4.693	4.515	4.468	4.449
									HIGH AMBIENT		

**Model : MCK050A / M4LC050C**

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	12.597	12.136	11.723	11.311	10.899	10.058	9.708	9.549	9.398
		SC	11.724	11.446	11.198	10.950	10.702	9.737	9.399	9.244	9.098
	15	TC	13.717	13.093	12.537	11.980	11.423	10.653	10.282	10.113	9.954
		SC	11.186	10.962	10.762	10.562	10.363	9.392	9.066	8.916	8.776
	18	TC	16.771	15.706	14.755	13.804	12.853	12.274	11.848	11.652	11.469
		SC	9.717	9.641	9.573	9.505	9.437	8.452	8.158	8.023	7.897
	19.4	TC	18.196	16.925	15.790	14.655	13.520	13.031	12.578	12.371	12.176
		SC	9.032	9.024	9.018	9.011	9.004	8.013	7.734	7.607	7.487
	20	TC	18.807	17.466	16.269	15.072	13.876	13.403	12.937	12.723	12.523
		SC	8.738	8.713	8.690	8.667	8.645	7.707	7.439	7.317	7.201
	22	TC	20.843	19.271	17.868	16.465	15.062	14.641	14.132	13.899	13.68
		SC	7.759	7.674	7.598	7.522	7.446	6.689	6.456	6.350	6.25
	24	TC	22.879	21.076	19.467	17.858	16.249	15.879	15.327	15.075	14.837
		SC	6.780	6.635	6.506	6.376	6.247	5.670	5.473	5.383	5.298
									HIGH AMBIENT		

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

$$\text{Sensible capacity (EDB)} = \text{Sensible capacity (26.7)} + 1.23 \times \text{L/s} \times (1 - \text{BPF}) \times (\text{EDB} - 26.7) / 1000$$

Where, BPF = Bypass factor

EDB = Entering dry bulb temperature, ° C

	MCK020A M4LC020B	MCK025A M4LC025B	MCK030A M4LC030C	MCK040A M4LC040C	MCK050A M4LC050C
Bypass factor	0.46	0.26	0.31	0.36	0.31

## B Series (Cooling Only – R22)

### Model : MCK015B / MLC015B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	3.661	3.438	3.238	3.039	2.840	2.601
		SC	3.661	3.438	3.238	3.039	2.840	2.601
	15	TC	3.870	3.617	3.390	3.164	2.938	2.666
		SC	3.462	3.272	3.103	2.934	2.764	2.561
	18	TC	4.441	4.105	3.805	3.505	3.205	2.845
		SC	2.920	2.821	2.733	2.645	2.557	2.452
	19.4	TC	4.707	4.332	3.998	3.664	3.329	2.928
		SC	2.667	2.611	2.561	2.511	2.461	2.401
	20	TC	4.821	4.440	4.100	3.761	3.421	3.013
		SC	2.559	2.506	2.459	2.412	2.365	2.309
	22	TC	5.201	4.800	4.442	4.084	3.726	3.296
		SC	2.197	2.156	2.120	2.083	2.047	2.003
	24	TC	5.582	5.160	4.784	4.407	4.031	3.579
		SC	1.836	1.807	1.781	1.755	1.729	1.697

### Model : MCK020B / MLC020B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	5.569	5.229	4.925	4.622	4.183	3.879	3.733	3.676	3.630
		SC	5.262	4.986	4.740	4.495	4.068	3.773	3.630	3.575	3.531
	15	TC	5.749	5.412	5.112	4.811	4.354	4.038	3.886	3.827	3.779
		SC	5.036	4.783	4.557	4.331	3.920	3.636	3.498	3.445	3.402
	18	TC	6.241	5.913	5.620	5.328	4.822	4.472	4.303	4.237	4.185
		SC	4.422	4.230	4.057	3.885	3.517	3.262	3.138	3.091	3.052
	19.4	TC	6.471	6.147	5.858	5.569	5.040	4.674	4.498	4.429	4.374
		SC	4.136	3.971	3.824	3.677	3.328	3.087	2.970	2.925	2.889
	20	TC	6.569	6.238	5.943	5.648	5.112	4.741	4.562	4.493	4.437
		SC	4.013	3.850	3.705	3.560	3.222	2.989	2.875	2.832	2.797
	22	TC	6.897	6.544	6.229	5.913	5.352	4.964	4.776	4.703	4.645
		SC	3.604	3.448	3.309	3.170	2.869	2.661	2.560	2.521	2.490
	24	TC	7.225	6.849	6.514	6.178	5.592	5.186	4.990	4.914	4.853
		SC	3.194	3.045	2.912	2.779	2.515	2.333	2.244	2.210	2.183
									HIGH AMBIENT		

### Model : MCK025B / MLC025B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	5.950	5.748	5.569	5.389	5.223	4.958	4.830	4.782	4.743
		SC	5.614	5.483	5.367	5.250	5.089	4.830	4.706	4.658	4.620
	15	TC	6.682	6.336	6.027	5.718	5.542	5.260	5.125	5.073	5.032
		SC	5.487	5.331	5.192	5.053	4.897	4.648	4.529	4.483	4.446
	18	TC	8.679	7.938	7.277	6.615	6.412	6.086	5.929	5.869	5.822
		SC	5.141	4.916	4.715	4.514	4.375	4.152	4.045	4.005	3.972
	19.4	TC	9.611	8.686	7.860	7.034	6.817	6.471	6.305	6.241	6.190
		SC	4.979	4.722	4.492	4.262	4.131	3.921	3.820	3.781	3.751
	20	TC	10.010	9.047	8.186	7.326	7.100	6.739	6.566	6.500	6.447
		SC	4.910	4.643	4.405	4.166	4.038	3.833	3.734	3.697	3.667
	22	TC	11.342	10.249	9.274	8.298	8.043	7.634	7.438	7.363	7.303
		SC	4.679	4.381	4.114	3.848	3.729	3.540	3.449	3.414	3.386
	24	TC	12.673	11.452	10.362	9.271	8.986	8.529	8.310	8.226	8.159
		SC	4.449	4.119	3.824	3.529	3.421	3.247	3.163	3.131	3.106
									HIGH AMBIENT		

**Model : MCK030B / MLC030B**

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	6.802	6.553	6.33	6.108	5.885	5.618
		SC	6.802	6.553	6.33	6.108	5.885	5.618
	15	TC	7.619	7.206	6.838	6.469	6.1	5.658
		SC	6.593	6.339	6.113	5.887	5.661	5.39
	18	TC	9.849	8.989	8.221	7.454	6.686	5.765
		SC	6.022	5.758	5.522	5.286	5.051	4.768
	19.4	TC	10.889	9.821	8.867	7.913	6.959	5.815
		SC	5.756	5.486	5.246	5.006	4.766	4.477
	20	TC	11.335	10.226	9.235	8.244	7.254	6.065
		SC	5.641	5.366	5.121	4.875	4.629	4.335
	22	TC	12.822	11.574	10.461	9.348	8.234	6.898
		SC	5.261	4.966	4.702	4.439	4.176	3.859
	24	TC	14.308	12.923	11.687	10.451	9.215	7.731
		SC	4.881	4.565	4.284	4.003	3.722	3.384

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (EDB) = Sensible capacity (26.7) + 1.23 x L/s x (1 - BPF) ( EDB - 26.7 ) / 1000

Where, BPF = Bypass factor  
EDB = Entering dry bulb temperature, ° C

	<b>MCK015B MLC015B</b>	<b>MCK020B MLC020B</b>	<b>MCK025B MLC025B</b>	<b>MCK030B MLC030B</b>
Bypass factor	0.67	0.16	0.26	0.21

## B Series (Cooling Only – R407C)

### Model : MCK015B / M4LC015B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	3.368	3.163	2.980	2.796	2.613	2.393
		SC	3.368	3.163	2.980	2.796	2.613	2.393
	15	TC	3.561	3.328	3.119	2.911	2.703	2.453
		SC	3.185	3.011	2.855	2.699	2.543	2.356
	18	TC	4.086	3.777	3.501	3.225	2.949	2.617
		SC	2.687	2.596	2.515	2.434	2.353	2.256
	19.4	TC	4.331	3.986	3.678	3.371	3.063	2.694
		SC	2.454	2.402	2.356	2.310	2.264	2.209
	20	TC	4.436	4.085	3.773	3.460	3.147	2.772
		SC	2.354	2.306	2.263	2.220	2.176	2.125
	22	TC	4.786	4.417	4.087	3.758	3.428	3.033
		SC	2.022	1.984	1.951	1.917	1.883	1.843
	24	TC	5.136	4.748	4.402	4.055	3.709	3.293
		SC	1.689	1.662	1.638	1.614	1.591	1.562

### Model : MCK020B / M4LC020B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	5.275	4.953	4.666	4.378	3.963	3.675	3.536	3.482	3.439
		SC	4.985	4.724	4.491	4.258	3.854	3.574	3.439	3.387	3.345
	15	TC	5.446	5.127	4.843	4.558	4.125	3.826	3.681	3.625	3.580
		SC	4.771	4.531	4.317	4.103	3.714	3.444	3.314	3.263	3.223
	18	TC	5.912	5.602	5.324	5.047	4.568	4.237	4.076	4.014	3.965
		SC	4.190	4.007	3.844	3.681	3.332	3.090	2.973	2.928	2.891
	19.4	TC	6.130	5.823	5.549	5.275	4.775	4.428	4.261	4.196	4.144
		SC	3.918	3.762	3.623	3.484	3.153	2.924	2.814	2.771	2.737
	20	TC	6.223	5.910	5.630	5.351	4.843	4.492	4.322	4.256	4.203
		SC	3.802	3.648	3.510	3.373	3.053	2.831	2.724	2.683	2.649
	22	TC	6.534	6.199	5.901	5.602	5.070	4.703	4.525	4.456	4.401
		SC	3.414	3.266	3.135	3.003	2.718	2.521	2.425	2.388	2.359
	24	TC	6.845	6.489	6.171	5.853	5.298	4.913	4.728	4.655	4.598
		SC	3.026	2.885	2.759	2.633	2.383	2.210	2.126	2.094	2.068

HIGH AMBIENT

### Model : MCK025B/ M4LC025B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	5.454	5.269	5.105	4.940	4.788	4.545	4.428	4.765	4.347
		SC	5.146	5.026	4.920	4.813	4.665	4.427	4.314	4.642	4.235
	15	TC	6.125	5.808	5.525	5.242	5.080	4.822	4.698	5.056	4.613
		SC	5.030	4.887	4.759	4.632	4.489	4.261	4.151	4.467	4.076
	18	TC	7.956	7.277	6.670	6.064	5.877	5.579	5.435	5.849	5.336
		SC	4.712	4.506	4.322	4.137	4.010	3.806	3.708	3.991	3.641
	19.4	TC	8.810	7.962	7.205	6.448	6.249	5.932	5.779	6.219	5.674
		SC	4.564	4.328	4.118	3.907	3.786	3.594	3.502	3.768	3.438
	20	TC	9.176	8.293	7.504	6.715	6.508	6.178	6.019	6.477	5.91
		SC	4.501	4.256	4.038	3.819	3.702	3.513	3.423	3.684	3.361
	22	TC	10.397	9.395	8.501	7.607	7.373	6.998	6.818	7.337	6.694
		SC	4.289	4.016	3.772	3.527	3.419	3.245	3.161	3.402	3.104
	24	TC	11.617	10.498	9.498	8.499	8.237	7.818	7.617	8.197	7.479
		SC	4.078	3.775	3.505	3.235	3.136	2.976	2.900	3.120	2.847

HIGH AMBIENT

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

$$\text{Sensible capacity (EDB)} = \text{Sensible capacity (26.7)} + 1.23 \times \text{L/s} \times (1 - \text{BPF}) \times (\text{EDB} - 26.7) / 1000$$

Where, BPF = Bypass factor

EDB = Entering dry bulb temperature, ° C

	MCK015B M4LC015B	MCK020B M4LC020B	MCK025B M4LC025B
Bypass factor	0.67	0.16	0.26

## A Series (Heating Only – R22)

Model : MCK020AR / MLC020BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	3.691	3.646	3.600	3.555	3.524	3.497
	SC	3.691	3.646	3.600	3.555	3.524	3.497
-5.0	TC	4.317	4.279	4.240	4.201	4.143	4.091
	SC	4.317	4.279	4.240	4.201	4.143	4.091
6.0	TC	6.041	5.981	5.921	5.862	5.790	5.725
	SC	6.041	5.981	5.921	5.862	5.790	5.725
12.0	TC	6.981	6.919	6.857	6.794	6.701	6.617
	SC	6.981	6.919	6.857	6.794	6.701	6.617
15.0	TC	7.451	7.385	7.318	7.252	7.152	7.062
	SC	7.451	7.385	7.318	7.252	7.152	7.062
18.3	TC	7.968	7.897	7.826	7.755	7.649	7.553
	SC	7.968	7.897	7.826	7.755	7.649	7.553

FROST REGION

Model : MCK025AR / MLC025BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	4.533	4.476	4.419	4.363	4.327	4.295
	SC	4.533	4.476	4.419	4.363	4.327	4.295
-5.0	TC	5.310	5.263	5.215	5.168	5.096	5.032
	SC	5.310	5.263	5.215	5.168	5.096	5.032
6.0	TC	7.448	7.408	7.367	7.327	7.186	7.059
	SC	7.448	7.408	7.367	7.327	7.186	7.059
12.0	TC	8.614	8.537	8.460	8.383	8.268	8.164
	SC	8.614	8.537	8.460	8.383	8.268	8.164
15.0	TC	9.197	9.115	9.033	8.951	8.828	8.717
	SC	9.197	9.115	9.033	8.951	8.828	8.717
18.3	TC	9.838	9.750	9.663	9.575	9.443	9.325
	SC	9.838	9.750	9.663	9.575	9.443	9.325

FROST REGION

Model : MCK030AR / MLC030CR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	5.513	5.460	5.407	5.355	5.285	5.223
	SC	5.513	5.460	5.407	5.355	5.285	5.223
-5.0	TC	6.365	6.308	6.251	6.194	6.108	6.031
	SC	6.365	6.308	6.251	6.194	6.108	6.031
6.0	TC	8.709	8.834	8.960	9.086	8.648	8.254
	SC	8.709	8.834	8.960	9.086	8.648	8.254
12.0	TC	9.987	9.898	9.809	9.720	9.586	9.466
	SC	9.987	9.898	9.809	9.720	9.586	9.466
15.0	TC	10.626	10.531	10.437	10.342	10.200	10.072
	SC	10.626	10.531	10.437	10.342	10.200	10.072
18.3	TC	11.329	11.228	11.127	11.026	10.875	10.739
	SC	11.329	11.228	11.127	11.026	10.875	10.739

FROST REGION

Model : MCK040AR/ MLC040CR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	6.925	6.822	6.720	6.618	6.588	6.561
	SC	6.925	6.822	6.720	6.618	6.588	6.561
-5.0	TC	8.200	8.127	8.053	7.980	7.869	7.770
	SC	8.200	8.127	8.053	7.980	7.869	7.770
6.0	TC	11.708	11.811	11.914	12.016	11.532	11.096
	SC	11.708	11.811	11.914	12.016	11.532	11.096
12.0	TC	13.621	13.500	13.378	13.257	13.074	12.910
	SC	13.621	13.500	13.378	13.257	13.074	12.910
15.0	TC	14.578	14.448	14.318	14.188	13.993	13.818
	SC	14.578	14.448	14.318	14.188	13.993	13.818
18.3	TC	15.630	15.491	15.352	15.212	15.003	14.815
	SC	15.630	15.491	15.352	15.212	15.003	14.815

FROST REGION

Model : MCK050AR/ MLC050CR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	8.684	8.592	8.500	8.409	8.313	8.228
	SC	8.684	8.592	8.500	8.409	8.313	8.228
-5.0	TC	10.076	9.986	9.895	9.805	9.670	9.548
	SC	10.076	9.986	9.895	9.805	9.670	9.548
6.0	TC	13.904	14.154	14.404	14.654	13.877	13.177
	SC	13.904	14.154	14.404	14.654	13.877	13.177
12.0	TC	15.992	15.849	15.707	15.564	15.350	15.157
	SC	15.992	15.849	15.707	15.564	15.350	15.157
15.0	TC	17.036	16.884	16.732	16.580	16.352	16.147
	SC	17.036	16.884	16.732	16.580	16.352	16.147
18.3	TC	18.184	18.022	17.860	17.698	17.455	17.236
	SC	18.184	18.022	17.860	17.698	17.455	17.236

FROST REGION

## A Series (Heating Mode –R407C)

Model : MCK020AR/ M4LC020BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	3.506	3.463	3.420	3.377	3.348	3.322
	SC	3.506	3.463	3.420	3.377	3.348	3.322
-5.0	TC	4.102	4.065	4.028	3.991	3.936	3.886
	SC	4.102	4.065	4.028	3.991	3.936	3.886
6.0	TC	5.739	5.682	5.625	5.569	5.500	5.439
	SC	5.739	5.682	5.625	5.569	5.500	5.439
12.0	TC	6.632	6.573	6.514	6.455	6.366	6.286
	SC	6.632	6.573	6.514	6.455	6.366	6.286
15.0	TC	7.079	7.015	6.952	6.889	6.795	6.709
	SC	7.079	7.015	6.952	6.889	6.795	6.709
18.3	TC	7.570	7.502	7.435	7.367	7.266	7.175
	SC	7.570	7.502	7.435	7.367	7.266	7.175

FROST REGION

Model : MCK025AR/ M4LC025BR

(HEATING MODE)

Outdoor WB°C	Kw	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	4.352	4.297	4.243	4.188	4.154	4.123
	SC	4.352	4.297	4.243	4.188	4.154	4.123
-5.0	TC	5.098	5.052	5.007	4.961	4.892	4.831
	SC	5.098	5.052	5.007	4.961	4.892	4.831
6.0	TC	7.150	7.111	7.073	7.034	6.898	6.776
	SC	7.150	7.111	7.073	7.034	6.898	6.776
12.0	TC	8.269	8.195	8.122	8.048	7.937	7.838
	SC	8.269	8.195	8.122	8.048	7.937	7.838
15.0	TC	8.829	8.750	8.671	8.593	8.475	8.368
	SC	8.829	8.750	8.671	8.593	8.475	8.368
18.3	TC	9.444	9.360	9.276	9.192	9.066	8.952
	SC	9.444	9.360	9.276	9.192	9.066	8.952

FROST REGION

Model : MCK030AR/M4LC030CR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	5.513	5.460	5.407	5.355	5.285	5.223
	SC	5.513	5.460	5.407	5.355	5.285	5.223
-5.0	TC	6.365	6.308	6.251	6.194	6.108	6.031
	SC	6.365	6.308	6.251	6.194	6.108	6.031
6.0	TC	8.709	8.834	8.960	9.086	8.648	8.254
	SC	8.709	8.834	8.960	9.086	8.648	8.254
12.0	TC	9.987	9.898	9.809	9.720	9.586	9.466
	SC	9.987	9.898	9.809	9.720	9.586	9.466
15.0	TC	10.626	10.531	10.437	10.342	10.200	10.072
	SC	10.626	10.531	10.437	10.342	10.200	10.072
18.3	TC	11.329	11.228	11.127	11.026	10.875	10.739
	SC	11.329	11.228	11.127	11.026	10.875	10.739

FROST REGION



Model : MCK040AR/ M4LC040CR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	6.925	6.822	6.720	6.618	6.588	6.561
	SC	6.925	6.822	6.720	6.618	6.588	6.561
-5.0	TC	8.200	8.127	8.053	7.980	7.869	7.770
	SC	8.200	8.127	8.053	7.980	7.869	7.770
6.0	TC	11.708	11.811	11.914	12.016	11.532	11.096
	SC	11.708	11.811	11.914	12.016	11.532	11.096
12.0	TC	13.621	13.500	13.378	13.257	13.074	12.910
	SC	13.621	13.500	13.378	13.257	13.074	12.910
15.0	TC	14.578	14.448	14.318	14.188	13.993	13.818
	SC	14.578	14.448	14.318	14.188	13.993	13.818
18.3	TC	15.630	15.491	15.352	15.212	15.003	14.815
	SC	15.630	15.491	15.352	15.212	15.003	14.815

FROST REGION

Model : MCK050AR/ M4LC050CR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	8.684	8.592	8.500	8.409	8.313	8.228
	SC	8.684	8.592	8.500	8.409	8.313	8.228
-5.0	TC	10.076	9.986	9.895	9.805	9.600	9.548
	SC	10.076	9.986	9.895	9.805	9.600	9.548
6.0	TC	10.904	14.154	14.404	14.654	13.877	13.177
	SC	10.904	14.154	14.404	14.654	13.877	13.177
12.0	TC	15.992	15.849	15.707	15.564	15.350	15.157
	SC	15.992	15.849	15.707	15.564	15.350	15.157
15.0	TC	17.036	16.884	16.732	16.580	16.352	16.147
	SC	17.036	16.884	16.732	16.580	16.352	16.147
18.3	TC	18.184	18.022	17.860	17.698	17.455	17.236
	SC	18.184	18.022	17.860	17.698	17.455	17.236

FROST REGION

## B Series (Heating Mode – R22)

Model : MCK015BR/ MLC015BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	1.843	1.811	1.779	1.747	1.747	1.746
	SC	1.843	1.811	1.779	1.747	1.747	1.746
-5.0	TC	2.211	2.191	2.172	2.152	2.122	2.095
	SC	2.211	2.191	2.172	2.152	2.122	2.095
6.0	TC	3.223	3.321	3.419	3.517	3.273	3.054
	SC	3.223	3.321	3.419	3.517	3.273	3.054
12.0	TC	3.774	3.741	3.707	3.673	3.623	3.577
	SC	3.774	3.741	3.707	3.673	3.623	3.577
15.0	TC	4.050	4.014	3.978	3.942	3.888	3.839
	SC	4.050	4.014	3.978	3.942	3.888	3.839
18.3	TC	4.354	4.315	4.276	4.237	4.179	4.127
	SC	4.354	4.315	4.276	4.237	4.179	4.127

FROST REGION

Model : MCK020BR/ MLC020BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	3.150	3.105	3.060	3.016	2.999	2.984
	SC	3.150	3.105	3.060	3.016	2.999	2.984
-5.0	TC	3.719	3.685	3.652	3.619	3.569	3.524
	SC	3.719	3.685	3.652	3.619	3.569	3.524
6.0	TC	5.284	5.428	5.571	5.715	5.343	5.008
	SC	5.284	5.428	5.571	5.715	5.343	5.008
12.0	TC	6.138	6.083	6.028	5.974	5.892	5.818
	SC	6.138	6.083	6.028	5.974	5.892	5.818
15.0	TC	6.565	6.506	6.448	6.389	6.301	6.222
	SC	6.565	6.506	6.448	6.389	6.301	6.222
18.3	TC	7.034	6.972	6.909	6.846	6.752	6.668
	SC	7.034	6.972	6.909	6.846	6.752	6.668

FROST REGION

Model : MCK025BR/ MLC025BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	3.648	3.614	3.580	3.546	3.499	3.456
	SC	3.648	3.614	3.580	3.546	3.499	3.456
-5.0	TC	4.205	4.167	4.130	4.092	4.035	3.985
	SC	4.205	4.167	4.130	4.092	4.035	3.985
6.0	TC	5.738	6.072	6.407	6.741	6.055	5.438
	SC	5.738	6.072	6.407	6.741	6.055	5.438
12.0	TC	6.574	6.515	6.457	6.398	6.310	6.231
	SC	6.574	6.515	6.457	6.398	6.310	6.231
15.0	TC	6.992	6.930	6.867	6.805	6.711	6.627
	SC	6.992	6.930	6.867	6.805	6.711	6.627
18.3	TC	7.452	7.385	7.319	7.253	7.153	7.063
	SC	7.452	7.385	7.319	7.253	7.153	7.063

FROST REGION

Model : MCK030BR/ MLC030BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	4.600	4.562	4.523	4.484	4.418	4.358
	SC	4.600	4.562	4.523	4.484	4.418	4.358
-5.0	TC	5.281	5.233	5.186	5.139	5.068	5.004
	SC	5.281	5.233	5.186	5.139	5.068	5.004
6.0	TC	7.152	7.504	7.855	8.206	7.455	6.779
	SC	7.152	7.504	7.855	8.206	7.455	6.779
12.0	TC	8.173	8.100	8.027	7.955	7.845	7.747
	SC	8.173	8.100	8.027	7.955	7.845	7.747
15.0	TC	8.684	8.606	8.529	8.451	8.335	8.231
	SC	8.684	8.606	8.529	8.451	8.335	8.231
18.3	TC	9.245	9.163	9.080	8.998	8.874	8.763
	SC	9.245	9.163	9.080	8.998	8.874	8.763

FROST REGION

## B Series (Heating Mode – R407C)

Model : MCK015BR/ M4LC015BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	1.690	1.660	1.631	1.601	1.601	1.601
	SC	1.690	1.660	1.631	1.601	1.601	1.601
-5.0	TC	2.027	2.009	1.991	1.972	1.945	1.921
	SC	2.027	2.009	1.991	1.972	1.945	1.921
6.0	TC	2.954	3.044	3.134	3.224	3.001	2.800
	SC	2.954	3.044	3.134	3.224	3.001	2.800
12.0	TC	3.460	3.429	3.398	3.367	3.321	3.279
	SC	3.460	3.429	3.398	3.367	3.321	3.279
15.0	TC	3.713	3.680	3.647	3.613	3.564	3.519
	SC	3.713	3.680	3.647	3.613	3.564	3.519
18.3	TC	3.991	3.955	3.920	3.884	3.831	3.783
	SC	3.991	3.955	3.920	3.884	3.831	3.783

FROST REGION

Model : MCK020BR/ M4LC020BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-9.0	TC	3.231	3.185	3.139	3.093	3.076	3.061
	SC	3.231	3.185	3.139	3.093	3.076	3.061
-5.0	TC	3.814	3.780	3.746	3.712	3.661	3.614
	SC	3.814	3.780	3.746	3.712	3.661	3.614
6.0	TC	5.420	5.567	5.715	5.862	5.480	5.137
	SC	5.420	5.567	5.715	5.862	5.480	5.137
12.0	TC	6.296	6.240	6.183	6.127	6.043	5.967
	SC	6.296	6.240	6.183	6.127	6.043	5.967
15.0	TC	6.734	6.674	6.613	6.553	6.463	6.382
	SC	6.734	6.674	6.613	6.553	6.463	6.382
18.3	TC	7.215	7.151	7.087	7.022	6.926	6.839
	SC	7.215	7.151	7.087	7.022	6.926	6.839

FROST REGION

Model : MCK025BR/ M4LC025BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C						
		15.0	17.0	19.0	21.0	24.0	26.7	
-9.0	TC	3.489	3.457	3.424	3.392	3.347	3.306	FROST REGION
	SC	3.489	3.457	3.424	3.392	3.347	3.306	
-5.0	TC	4.022	3.986	3.950	3.914	3.860	3.811	
	SC	4.022	3.986	3.950	3.914	3.860	3.811	
6.0	TC	5.488	5.808	6.128	6.448	5.792	5.201	
	SC	5.488	5.808	6.128	6.448	5.792	5.201	
12.0	TC	6.288	6.232	6.176	6.120	6.036	5.960	
	SC	6.288	6.232	6.176	6.120	6.036	5.960	
15.0	TC	6.688	6.628	6.569	6.509	6.419	6.339	
	SC	6.688	6.628	6.569	6.509	6.419	6.339	
18.3	TC	7.128	7.064	7.001	6.937	6.842	6.756	
	SC	7.128	7.064	7.001	6.937	6.842	6.756	

Model : MCK030BR/ M4LC030BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C						
		15.0	17.0	19.0	21.0	24.0	26.7	
-9.0	TC	4.600	4.562	4.523	4.484	4.418	4.358	FROST REGION
	SC	4.600	4.562	4.523	4.484	4.418	4.358	
-5.0	TC	5.281	5.233	5.186	5.139	5.068	5.004	
	SC	5.281	5.233	5.186	5.139	5.068	5.004	
6.0	TC	7.152	7.504	7.855	8.206	7.455	6.779	
	SC	7.152	7.504	7.855	8.206	7.455	6.779	
12.0	TC	8.173	8.100	8.027	7.955	7.845	7.747	
	SC	8.173	8.100	8.027	7.955	7.845	7.747	
15.0	TC	8.684	8.606	8.529	8.451	8.335	8.231	
	SC	8.684	8.606	8.529	8.451	8.335	8.231	
18.3	TC	9.245	9.163	9.080	8.998	8.874	8.763	
	SC	9.245	9.163	9.080	8.998	8.874	8.763	

## C Series (Cooling Only – R22)

### Model : MCK010C / MLC010B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	2.794	2.622	2.468	2.315	2.161	1.977
		SC	2.794	2.622	2.468	2.315	2.161	1.977
	15	TC	2.909	2.729	2.569	2.409	2.249	2.056
		SC	2.706	2.553	2.417	2.280	2.144	1.980
	18	TC	3.221	3.021	2.843	2.665	2.487	2.273
		SC	2.466	2.366	2.276	2.187	2.097	1.990
	19.4	TC	3.366	3.157	2.971	2.784	2.598	2.374
		SC	2.354	2.278	2.211	2.143	2.075	1.994
	20	TC	3.429	3.216	3.026	2.837	2.647	2.419
		SC	2.306	2.226	2.153	2.081	2.009	1.923
	22	TC	2.637	3.412	3.211	3.011	2.810	2.570
		SC	2.146	2.049	1.963	1.876	1.790	1.686
	24	TC	3.845	3.608	3.397	3.185	2.974	2.720
		SC	1.986	1.873	1.772	1.671	1.570	1.449

### Model : MCK015C / MLC015B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	3.517	3.193	2.903	2.614	2.324	1.977
		SC	3.349	3.060	2.802	2.544	2.286	1.977
	15	TC	3.279	3.052	2.850	2.648	2.446	2.203
		SC	3.276	3.023	2.797	2.570	2.344	2.072
	18	TC	2.630	2.670	2.705	2.741	2.776	2.819
		SC	3.079	2.922	2.781	2.641	2.501	2.333
	19.4	TC	2.327	2.491	2.638	2.784	2.931	3.107
		SC	2.987	2.874	2.774	2.674	2.574	2.454
	20	TC	2.197	2.378	2.540	2.701	2.863	3.056
		SC	2.947	2.826	2.717	2.609	2.500	2.370
	22	TC	1.765	2.001	2.212	2.424	2.635	2.888
		SC	2.815	2.662	2.526	2.389	2.253	2.089
	24	TC	1.332	1.624	1.885	2.146	2.407	2.720
		SC	2.684	2.499	2.335	2.170	2.005	1.808

### Model : MCK020C / MLC020B

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C					
			19.4	25	30	35	40	46
26.7	13.9	TC	5.539	5.227	4.949	4.670	4.392	4.058
		SC	4.835	4.671	4.525	4.379	4.233	4.058
	15	TC	5.707	5.410	5.145	4.879	4.614	4.295
		SC	4.667	4.516	4.381	4.246	4.111	3.949
	18	TC	6.166	5.909	5.679	5.449	5.219	4.944
		SC	4.212	4.094	3.989	3.884	3.779	3.653
	19.4	TC	6.380	6.141	5.928	5.715	5.502	5.246
		SC	3.999	3.897	3.806	3.715	3.624	3.515
	20	TC	6.472	6.223	6.001	5.779	5.557	5.290
		SC	3.908	3.798	3.699	3.601	3.502	3.384
	22	TC	6.778	6.495	6.243	5.991	5.739	5.437
		SC	3.604	3.466	3.342	3.219	3.096	2.948
	24	TC	7.083	6.768	6.486	6.204	5.922	5.584
		SC	3.300	3.134	2.986	2.838	2.689	2.511

## C Series (Heating Mode – R22)

Model : MCK010CR/ MLC010BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C						
		15.0	17.0	19.0	21.0	24.0	26.7	
-9.0	TC	1.628	1.603	1.578	1.553	1.548	1.543	FROST REGION
	SC	1.628	1.603	1.578	1.553	1.548	1.543	
-5.0	TC	1.933	1.916	1.899	1.881	1.855	1.832	
	SC	1.933	1.916	1.899	1.881	1.855	1.832	
6.0	TC	2.772	2.776	2.780	2.784	2.702	2.627	
	SC	2.772	2.776	2.780	2.784	2.702	2.627	
12.0	TC	3.230	3.201	3.172	3.143	3.100	3.061	
	SC	3.230	3.201	3.172	3.143	3.100	3.061	
15.0	TC	3.459	3.428	3.397	3.366	3.320	3.278	
	SC	3.459	3.428	3.397	3.366	3.320	3.278	
18.3	TC	3.710	3.677	3.644	3.611	3.562	3.517	
	SC	3.710	3.677	3.644	3.611	3.562	3.517	

Model : MCK015CR/ MLC015BR

(HEATING MODE)

Outdoor WB°C	kW	Indoor DB°C						
		15.0	17.0	19.0	21.0	24.0	26.7	
-9.0	TC	2.258	2.238	2.218	2.198	2.167	2.139	FROST REGION
	SC	2.258	2.238	2.218	2.198	2.167	2.139	
-5.0	TC	2.598	2.574	2.551	2.528	2.493	2.461	
	SC	2.598	2.574	2.551	2.528	2.493	2.461	
6.0	TC	3.532	3.546	3.561	3.576	3.455	3.347	
	SC	3.532	3.546	3.561	3.576	3.455	3.347	
12.0	TC	4.041	4.005	3.969	3.933	3.879	3.830	
	SC	4.041	4.005	3.969	3.933	3.879	3.830	
15.0	TC	4.296	4.258	4.219	4.181	4.214	4.072	
	SC	4.296	4.258	4.219	4.181	4.214	4.072	
18.3	TC	4.576	4.535	4.495	4.454	4.393	4.338	
	SC	4.576	4.535	4.495	4.454	4.393	4.338	

Model : MCK020CR/ MLC020BR

(HEATING MODE)

Outdoor WB°C	Kw	Indoor DB°C						
		15.0	17.0	19.0	21.0	24.0	26.7	
-9.0	TC	3.641	3.599	3.558	3.517	3.481	3.449	FROST REGION
	SC	3.641	3.599	3.558	3.517	3.481	3.449	
-5.0	TC	4.240	4.202	4.164	4.126	4.069	4.018	
	SC	4.240	4.202	4.164	4.126	4.069	4.018	
6.0	TC	5.888	5.713	5.538	5.363	5.477	5.580	
	SC	5.888	5.713	5.538	5.363	5.477	5.580	
12.0	TC	6.786	6.726	6.665	6.605	6.514	6.432	
	SC	6.786	6.726	6.665	6.605	6.514	6.432	
15.0	TC	7.236	7.171	7.107	7.042	6.945	6.858	
	SC	7.236	7.171	7.107	7.042	6.945	6.858	
18.3	TC	7.730	7.661	7.592	7.523	7.420	7.327	
	SC	7.730	7.661	7.592	7.523	7.420	7.327	

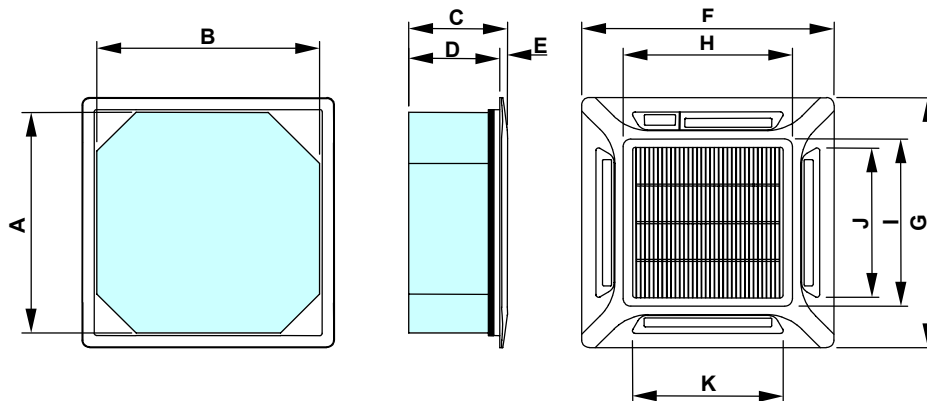
# Outlines and Dimensions

## Indoor Unit

**MCK020/ 025/ 030/ 040/ 050A/AR**

**MCK015/ 020/ 025/ 030B/BR**

**MCK010/ 015/ 020C/CR**

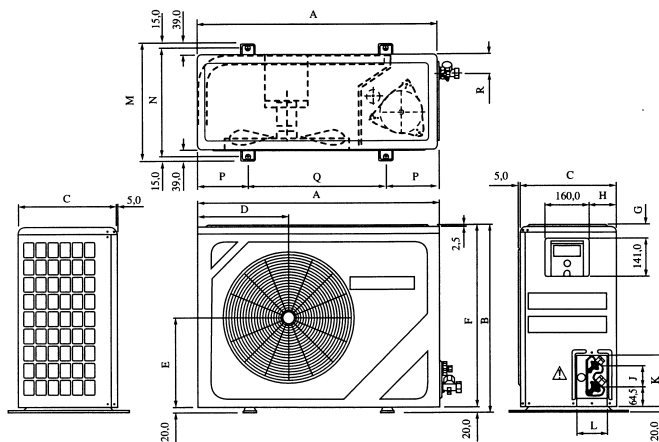


MODEL	A	B	C	D	E	F	G	H	I	J	K
MCK-A (All model)	820	820	378	350	28	930	930	626	626	555	555
MCK-B (All model)	650	650	362	340	22	727	727	489	489	444	444
MCK-C (All model)	570	570	295	275	20	640	640	408	408	364	364

## Outdoor Unit

**MLC010B/BR**

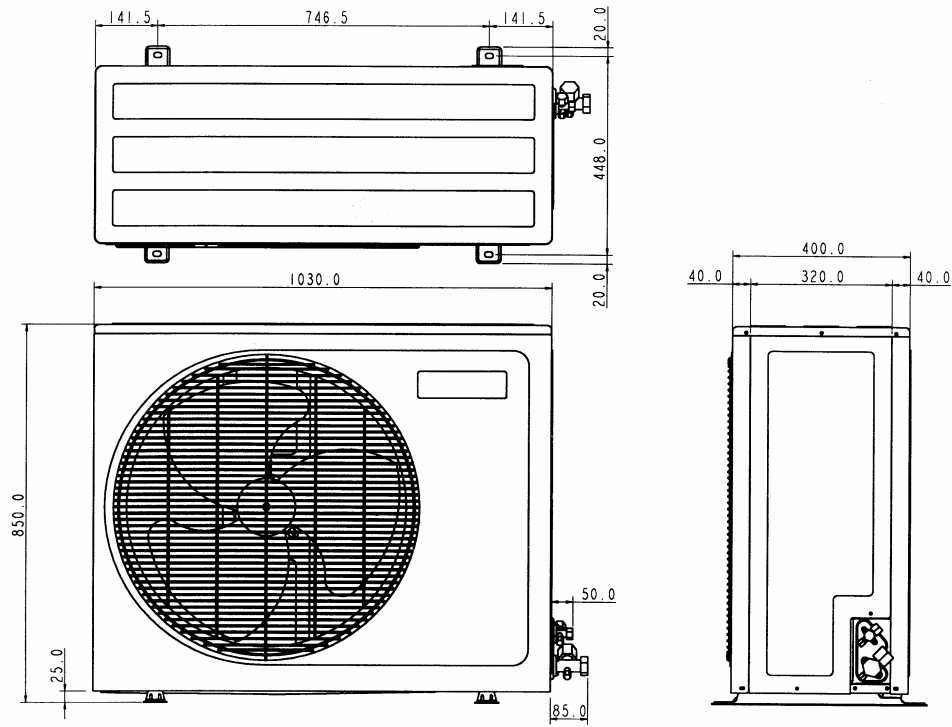
**MLC/ M4LC015/ 020/ 025B/BR**



DIMENSION	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
010B/ 010BR 015B / 015BR	740	494	270	266	233	474	52	60	54	166	92	348	318	129	482	68,5
020B/ 020BR	840	646	330	297	309	626	46	90	64	177	106	408	378	124	492	78,5

## Outdoor Unit

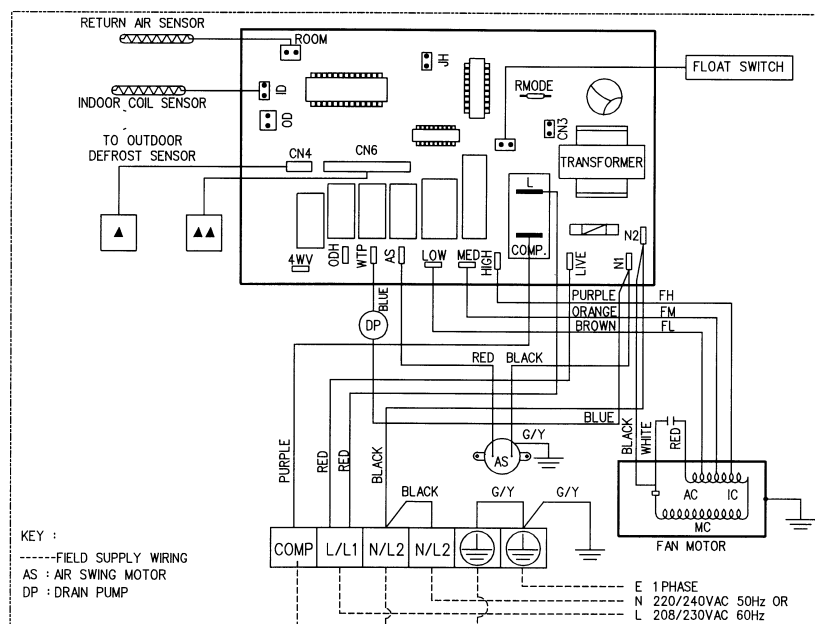
MLC030/ 040/ 050C/CR  
M4LC030/ 040/ 050C/CR



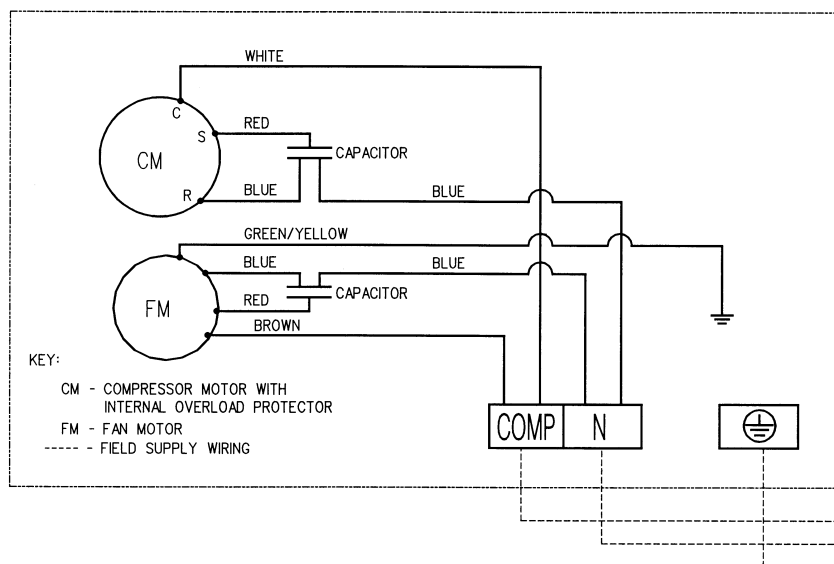


# Wiring Diagrams

## Indoor Unit (Cooling Only) Model : MCK020/ 025A

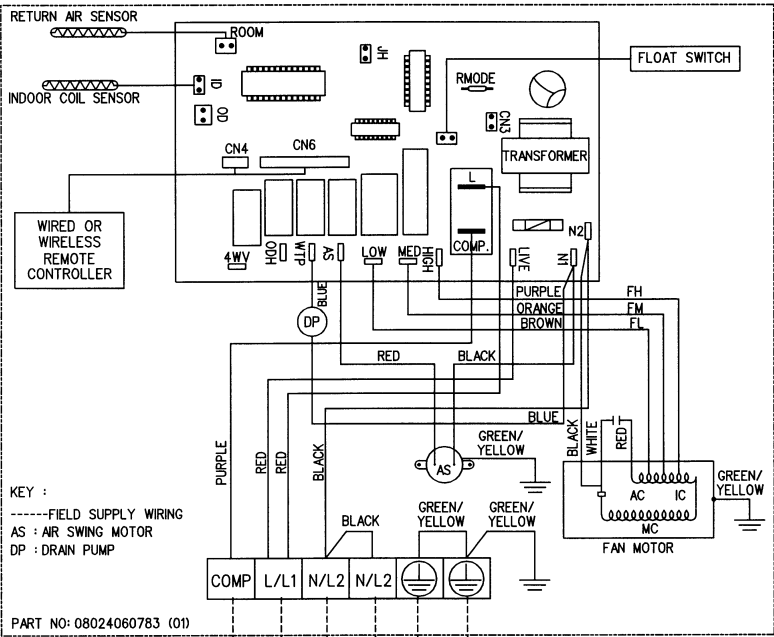


## Outdoor Unit Model : MLC/ M4LC020/ 025B

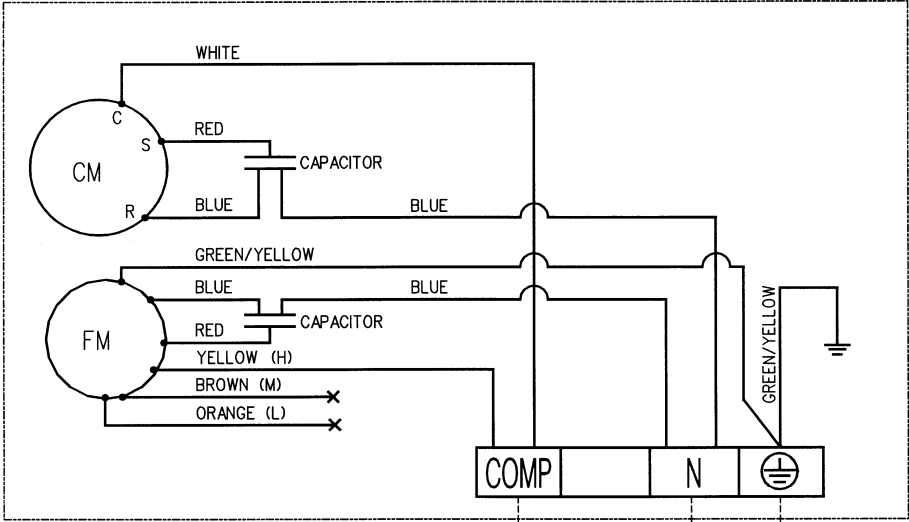


- ▲ CN4 IS CONNECTED TO WIRED HANDSET
  - ▲▲ CN6 IS CONNECTED TO SENSOR & INDICATOR LIGHT OF WIRELESS HANDSET
- REMARK = EITHER CN4 OR CN6 CAN BE CONNECTED AT ANY ONE TIME

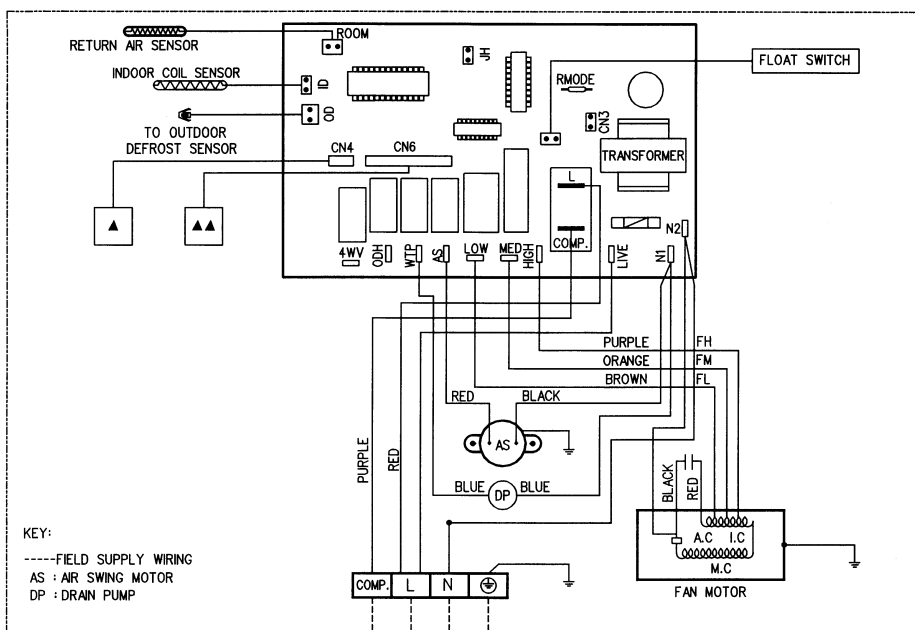
**Indoor Unit (Cooling Only)**  
**Model : MCK030A**



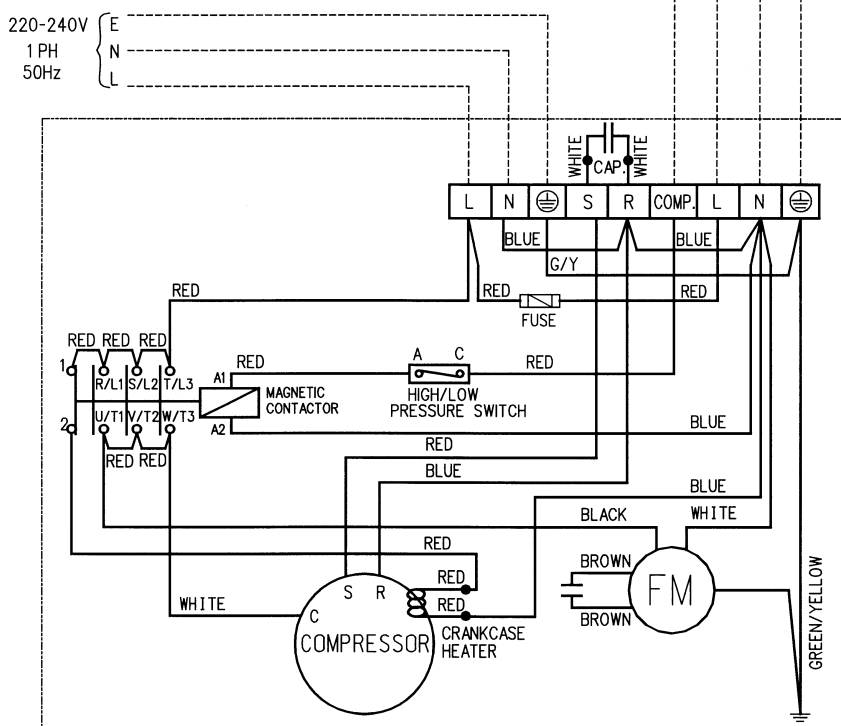
**Outdoor Unit**  
**Model : MLC030B**



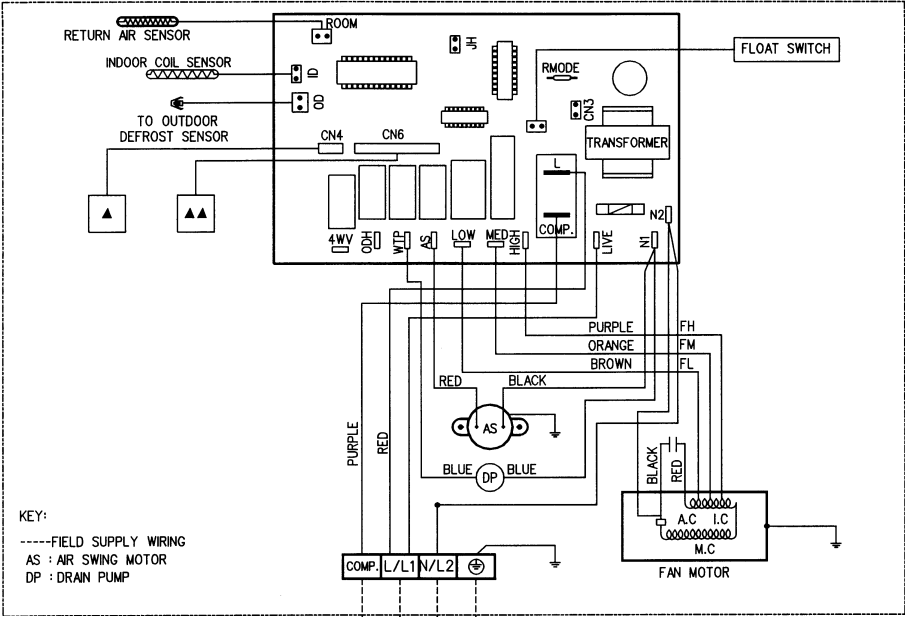
**Indoor Unit (Cooling Only)**  
**Model : MCK030A**



**Outdoor Unit**  
**Model : MLC / M4LC030C**

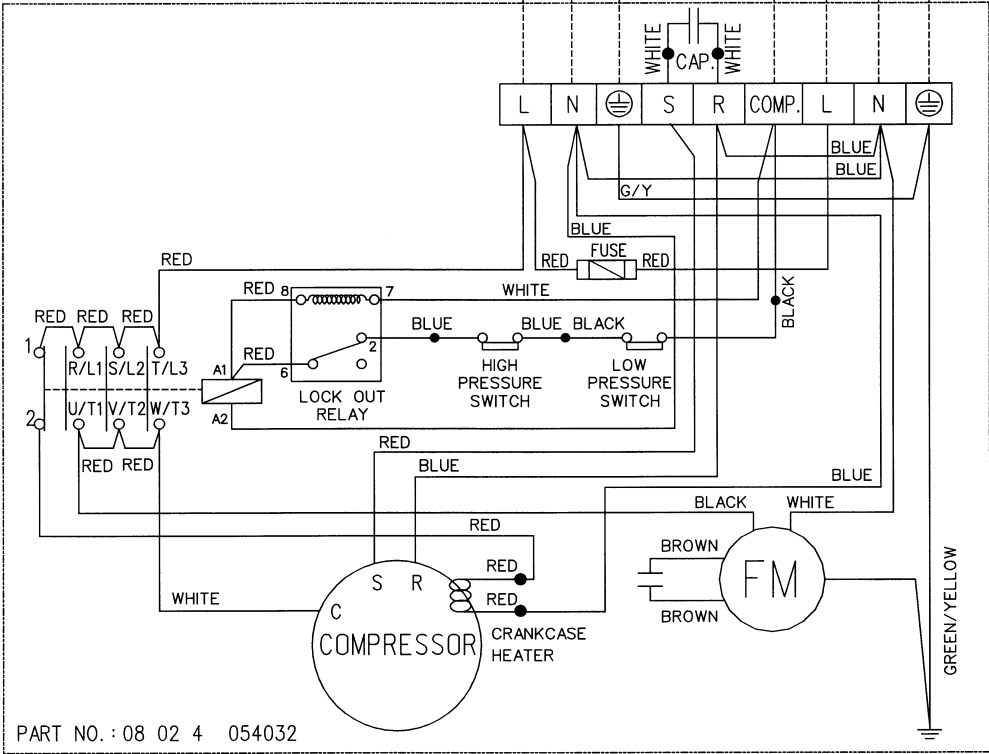


**Indoor Unit (Cooling Only)**  
**Model : MCK040A**



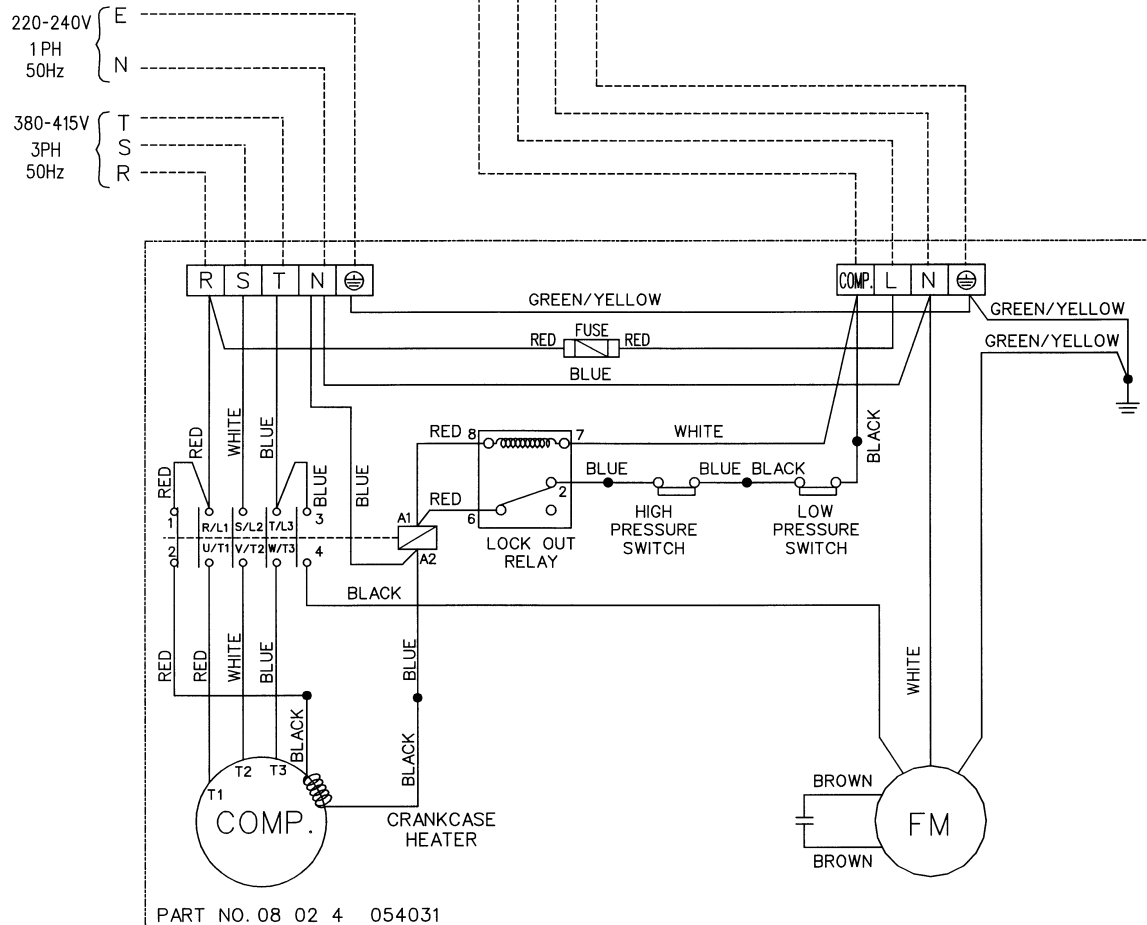
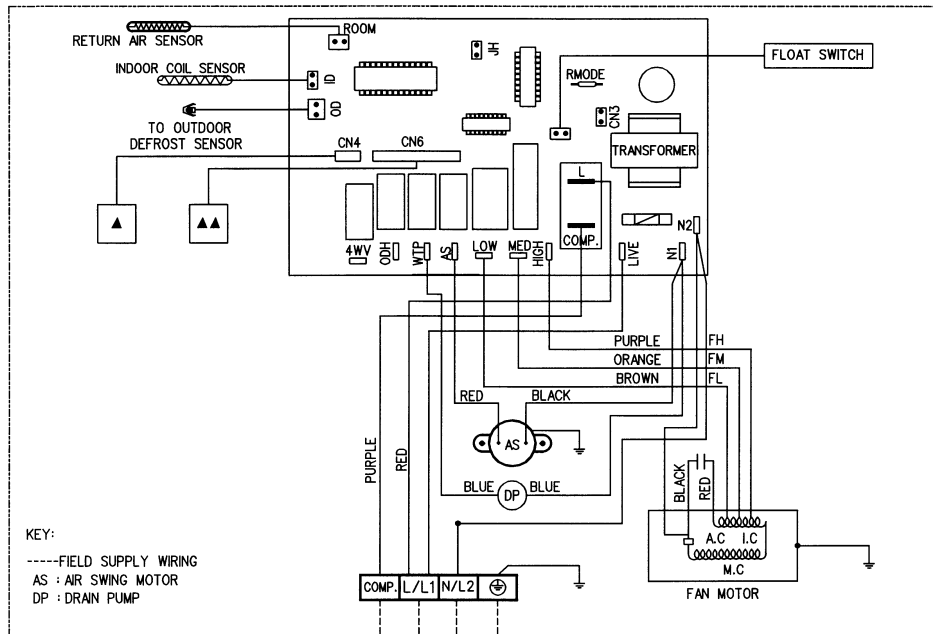
**Outdoor Unit**  
**Model : MLC035C**

220-240V  
 1 PH  
 50Hz



## Indoor Unit (Cooling Only)

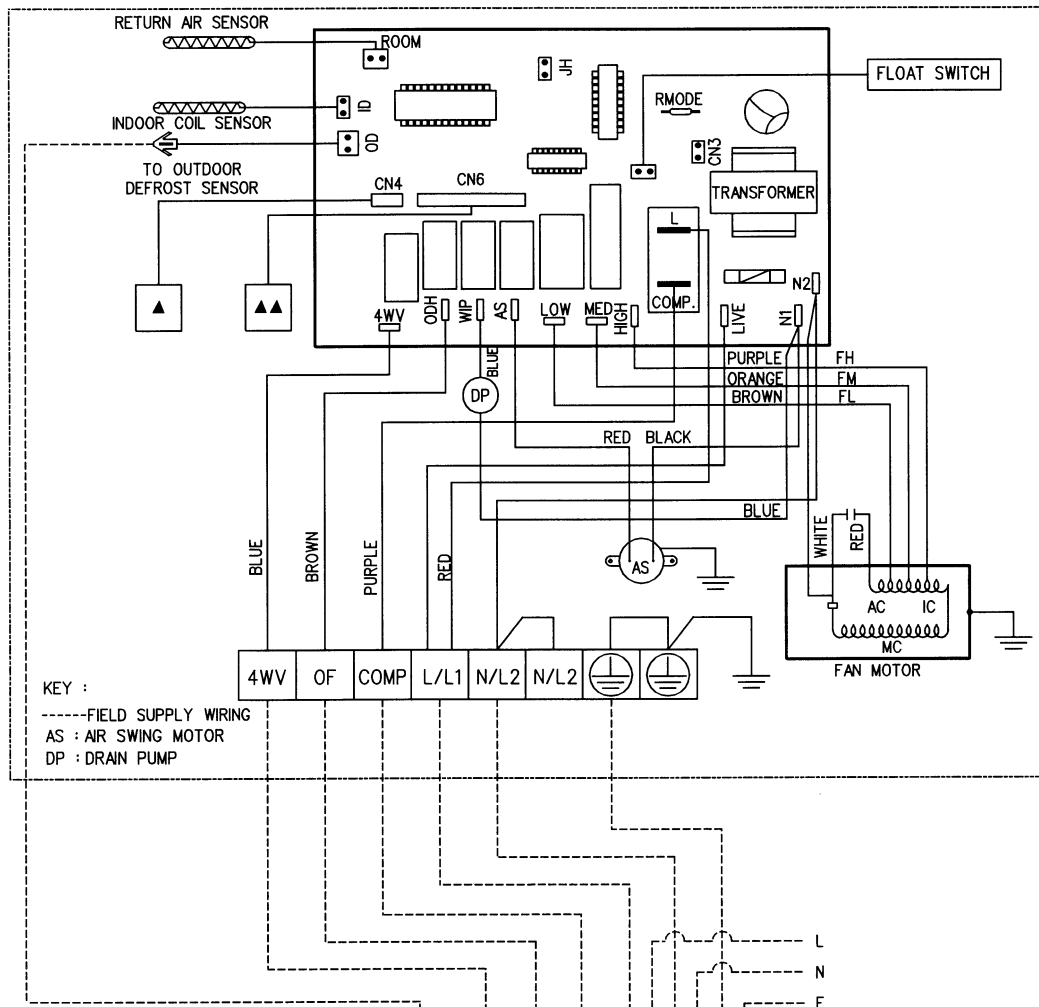
### Model : MCK040/ 050A



## Outdoor Unit

### Model : MLC / M4LC040/ 050C

## Indoor Unit (Heat Pump) Model : MCK020/ 025AR



## Outdoor Unit Model : MLC / M4LC020/ 025BR

KEY:

FM – FAN MOTOR

CM – COMPRESSOR MOTOR

4V - 4 WAY VALVE

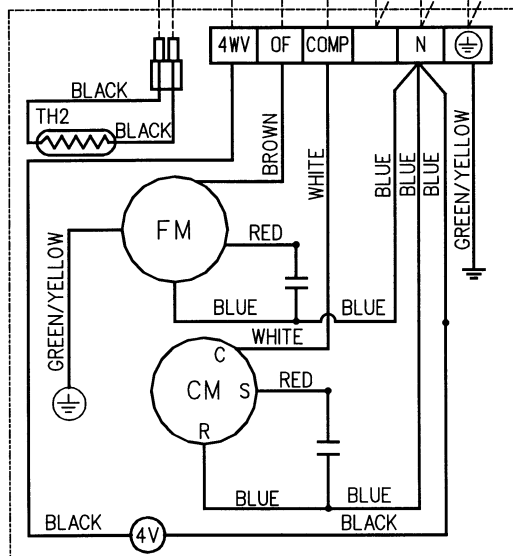
TH2 – OUTDOOR THERMISTOR

----- FIELD SUPPLY WIRING

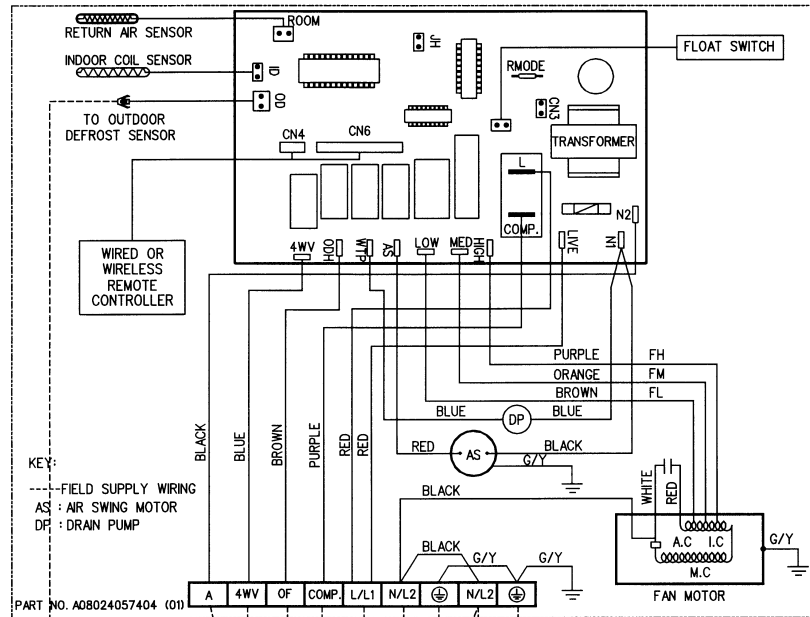
▲ CN4 IS CONNECTED TO WIRED HANDSET

▲▲ CN6 IS CONNECTED TO SENSOR & INDICATOR LIGHT OF WIRELESS HANSET

REMARK – EITHER CN4 OR CN6 CAN BE CONNECTED AT ANY ONE TIME

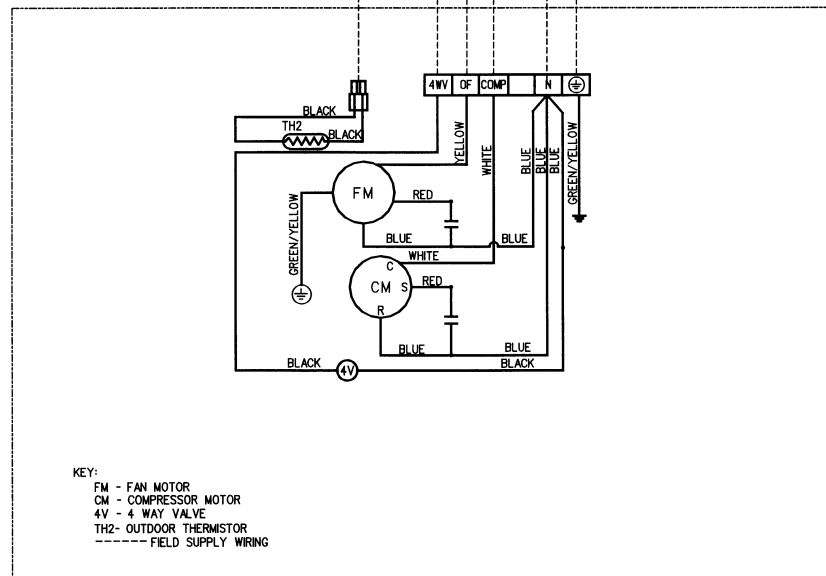


## Indoor Unit (Heat Pump) Model : MCK030AR



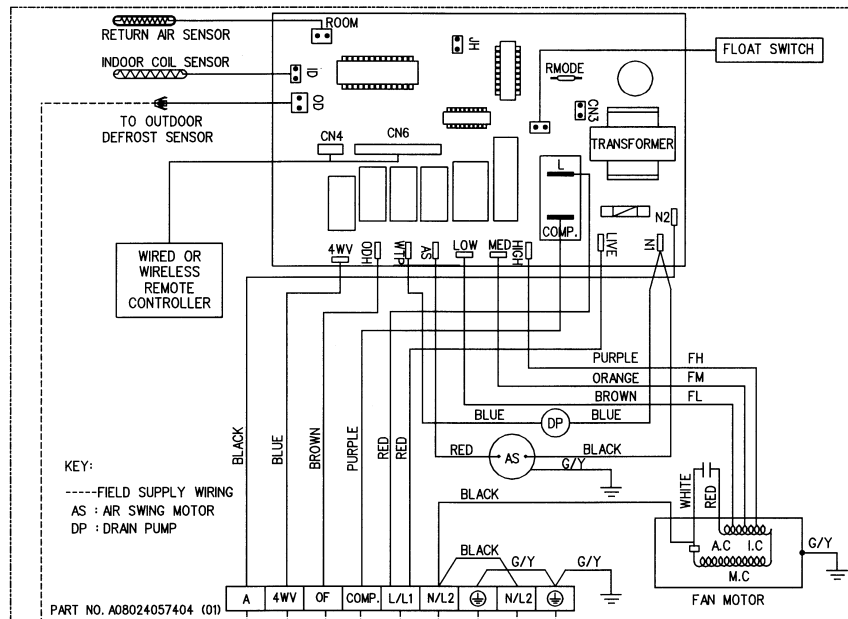
220-240V 1Ph 50Hz  
OR  
208-220V 1Ph 60Hz

## Outdoor Unit Model : MLC030BR

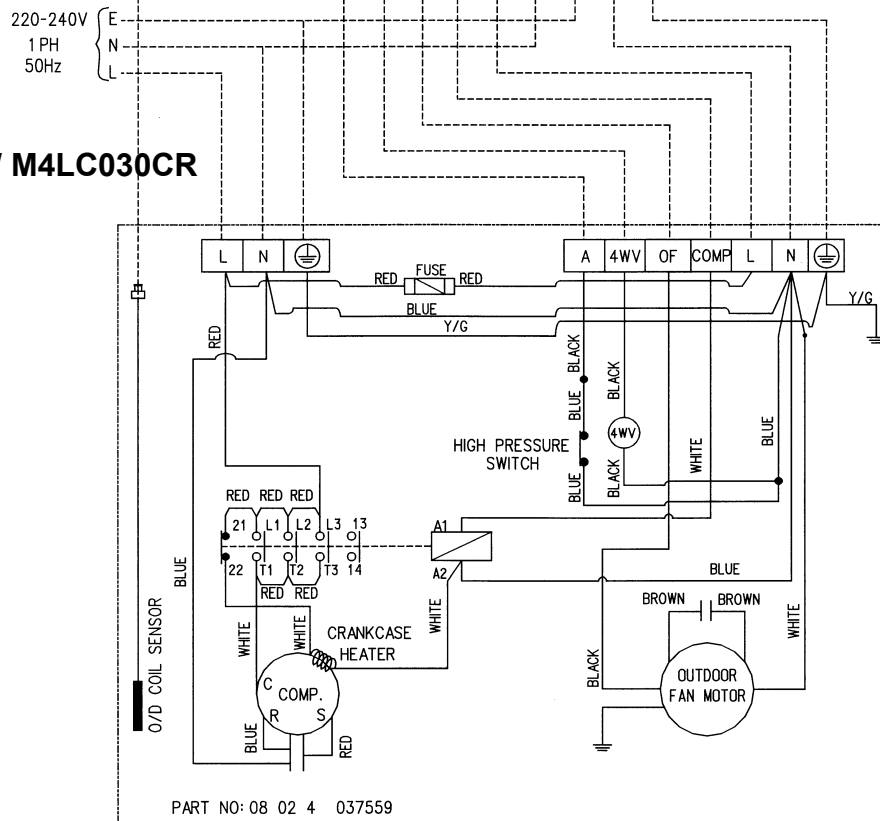


- ▲ CN4 IS CONNECTED TO WIRED HANDSET
- ▲▲ CN6 IS CONNECTED TO SENSOR & INDICATOR LIGHT OF WIRELESS HANDSET
- REMARK - EITHER CN4 OR CN6 CAN BE CONNECTED AT ANY ONE TIME

## Indoor Unit (Heat Pump) Model : MCK030AR



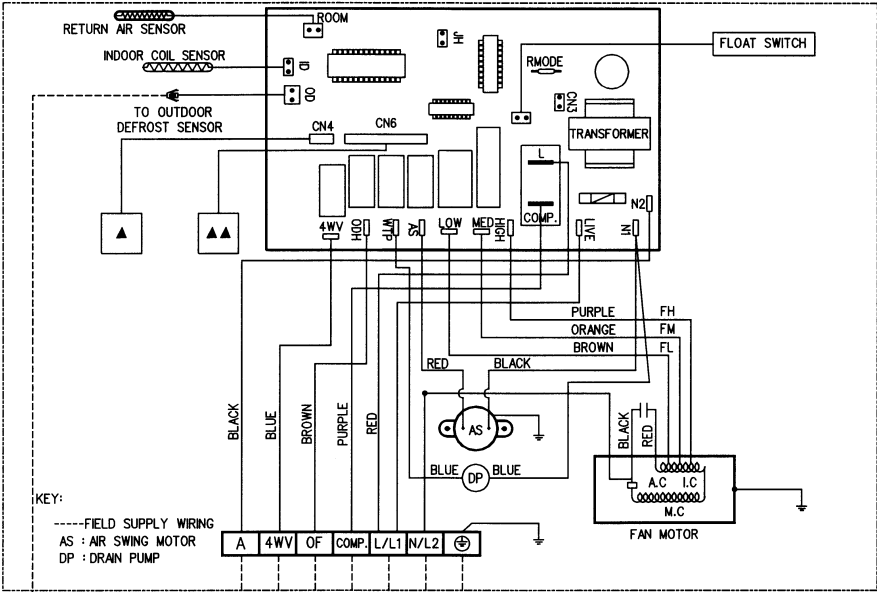
## Outdoor Unit Model : MLC / M4LC030CR



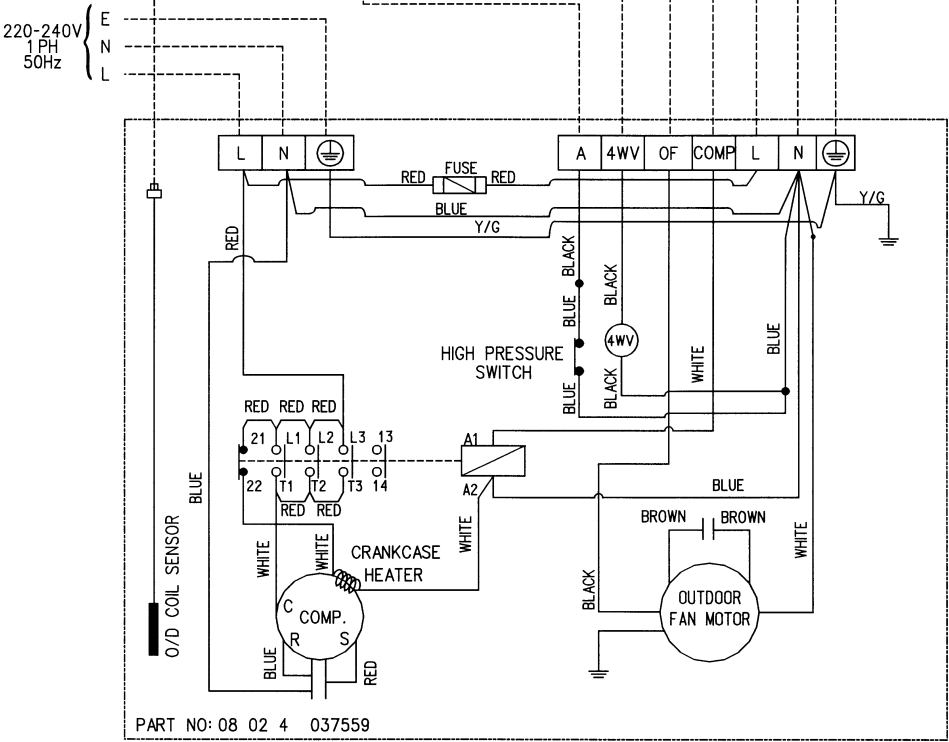
- ▲ CN4 IS CONNECTED TO WIRED HANDSET
- ▲▲ CN6 IS CONNECTED TO SENSOR & INDICATOR LIGHT OF WIRELESS HANDSET
- REMARK - EITHER CN4 OR CN6 CAN BE CONNECTED AT ANY ONE TIME



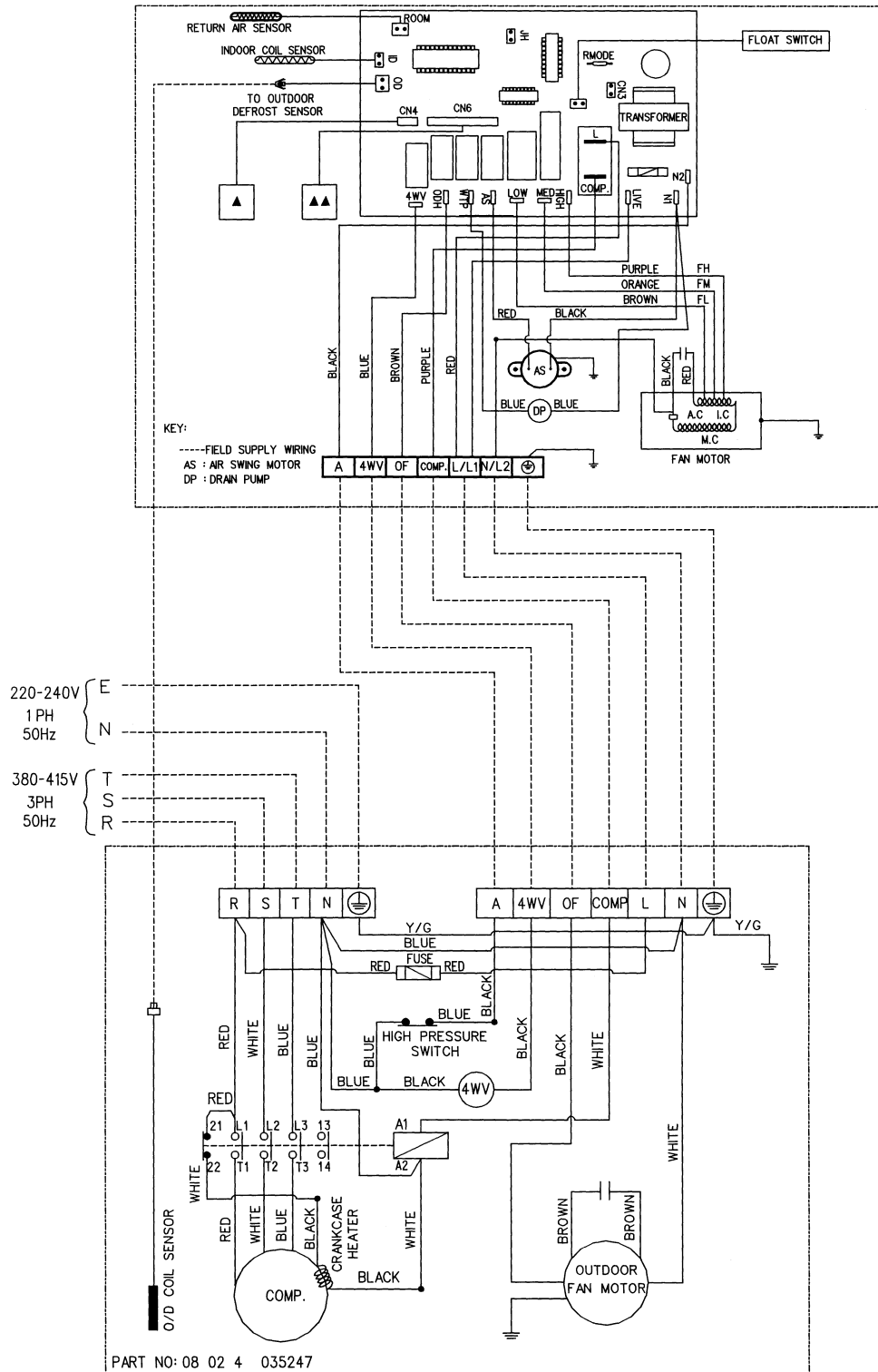
Indoor Unit (Heat Pump)  
Model : MCK040AR



Outdoor Unit  
Model : MLC035CR



## Indoor Unit (Heat Pump) Model : MCK040/ 050AR



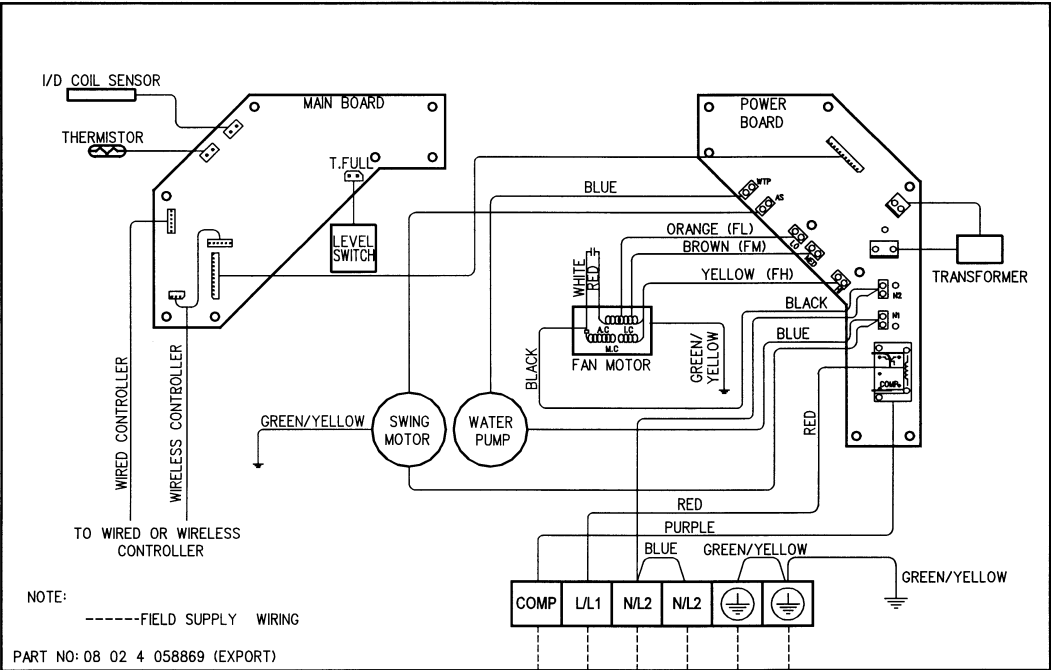
▲ CN4 IS CONNECTED TO WIRED HANDSET

▲▲ CN6 IS CONNECTED TO SENSOR & INDICATOR LIGHT  
OF WIRELESS HANDSET

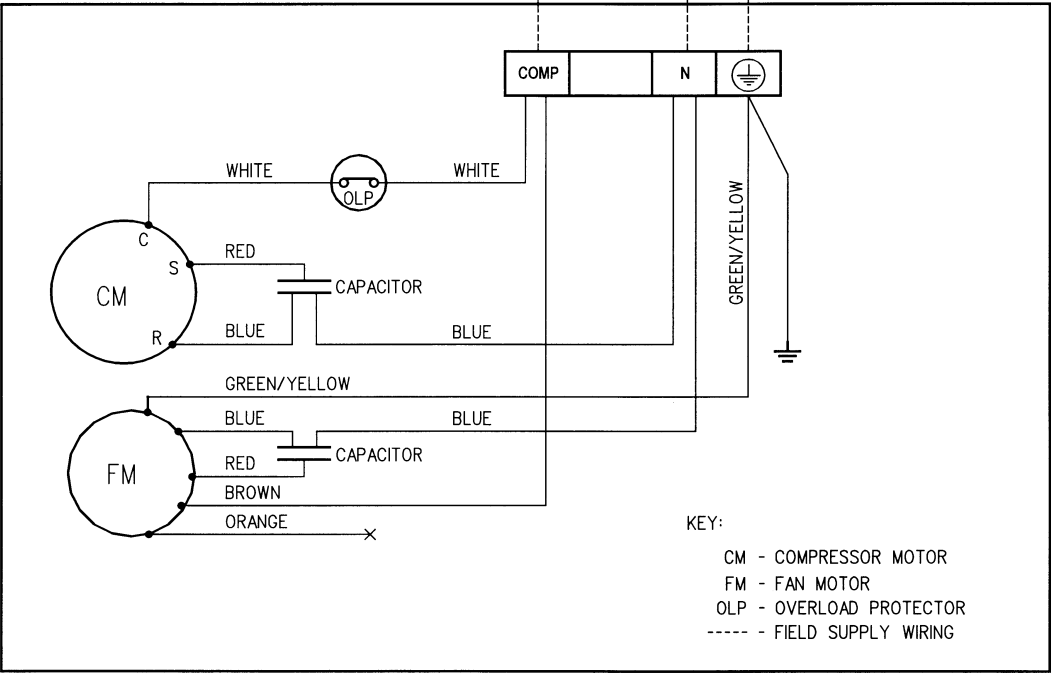
REMARK - EITHER CN4 OR CN6 CAN BE CONNECTED AT ANY ONE TIME

## Outdoor Unit Model : MLC/ M4LC040/ 050CR

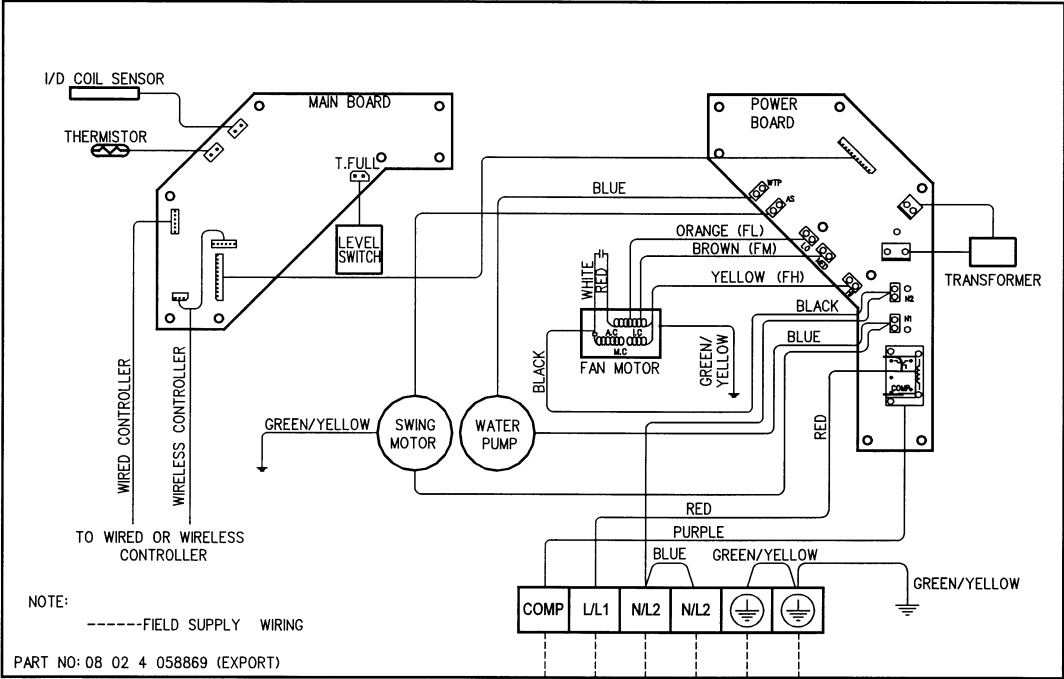
**Indoor Unit (Cooling Only )**  
**Model : MCK015B**



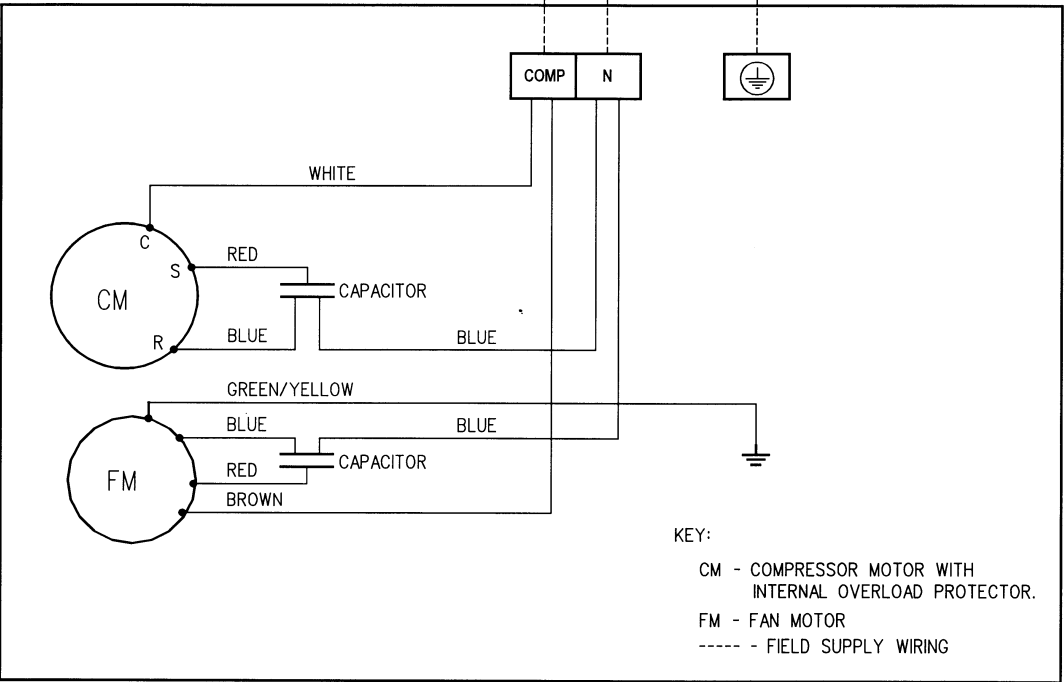
**Outdoor Unit**  
**Model : MLC015B**



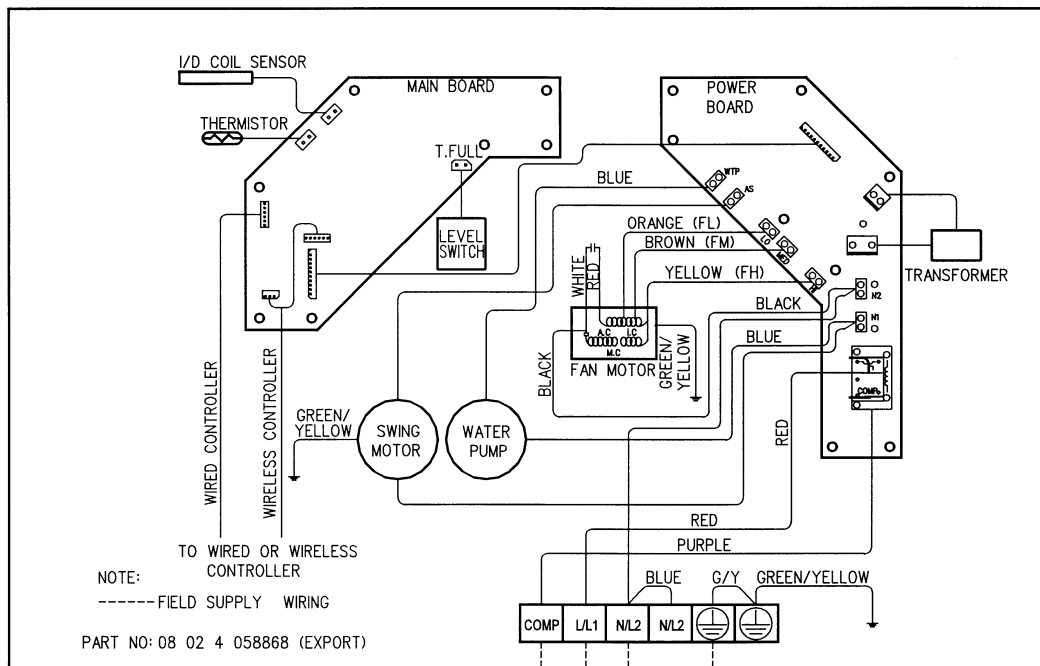
Indoor Unit (Cooling Only)  
Model : MCK020/ 025B



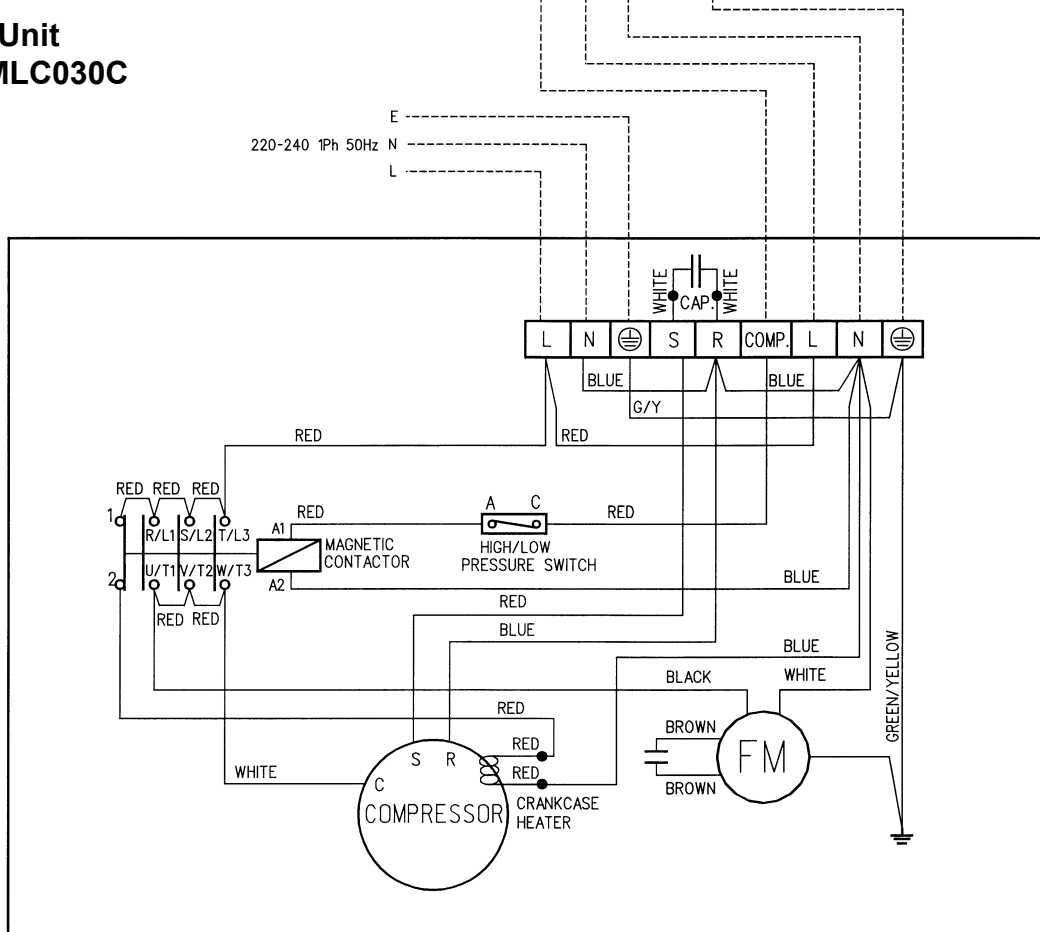
Outdoor Unit  
Model : MLC020/ 025B



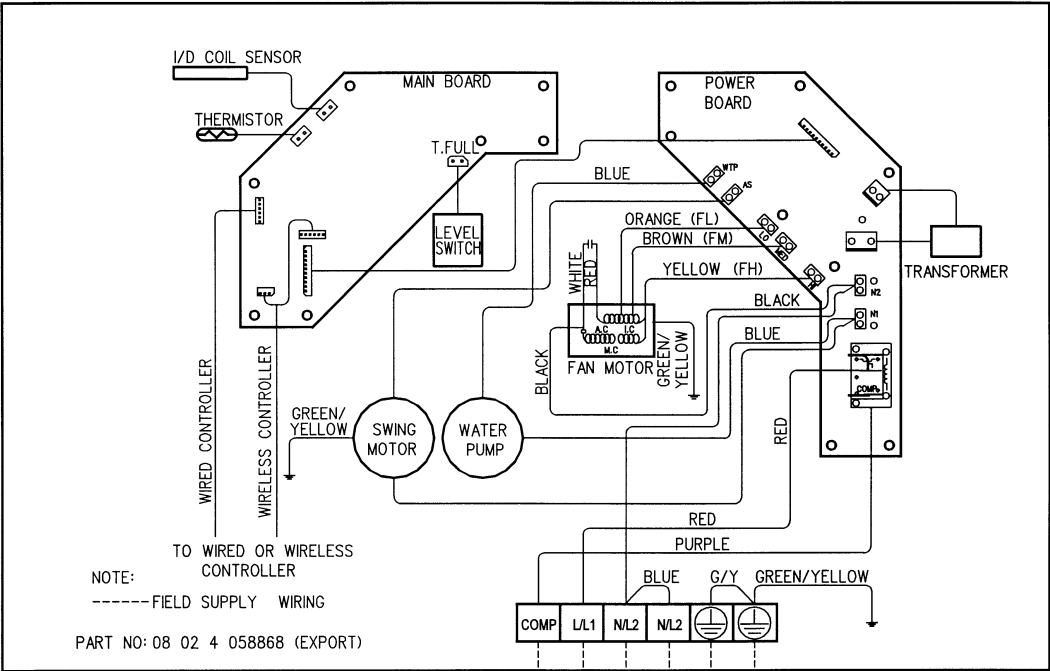
**Indoor Unit (Cooling Only )**  
**Model : MCK030B**



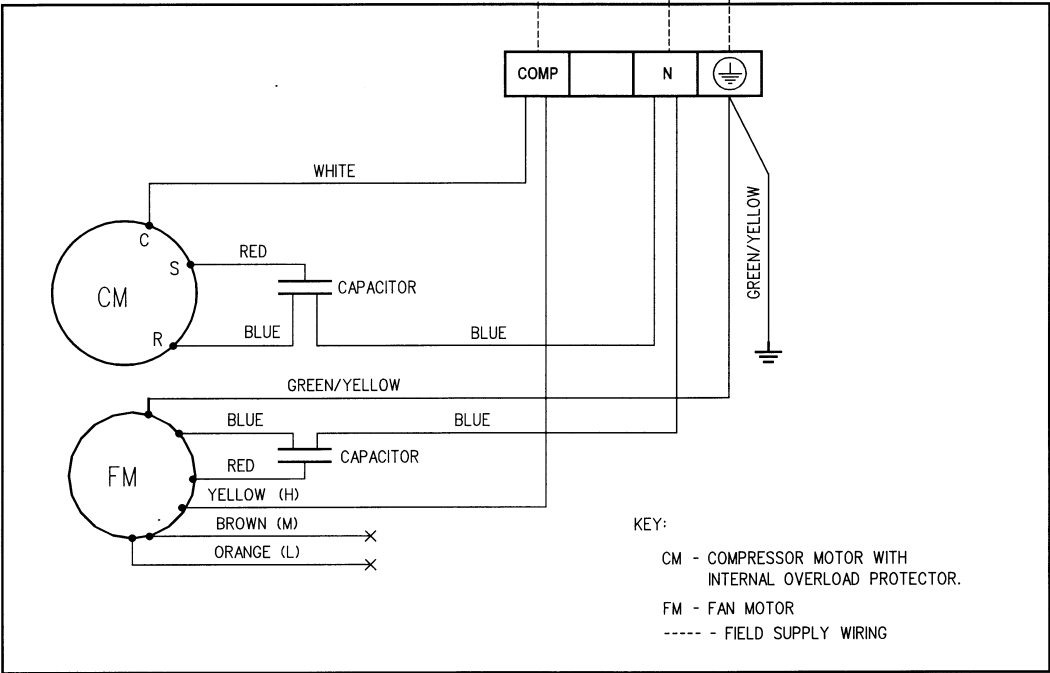
**Outdoor Unit**  
**Model : MLC030C**



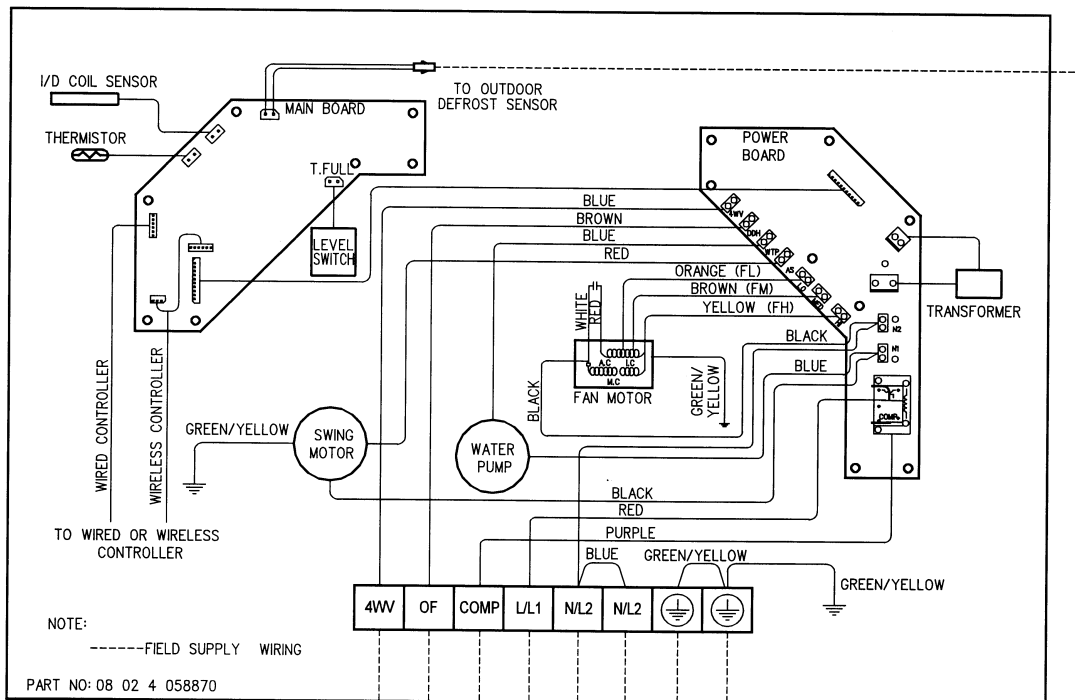
**Indoor Unit (Cooling Only )**  
**Model : MCK030B**



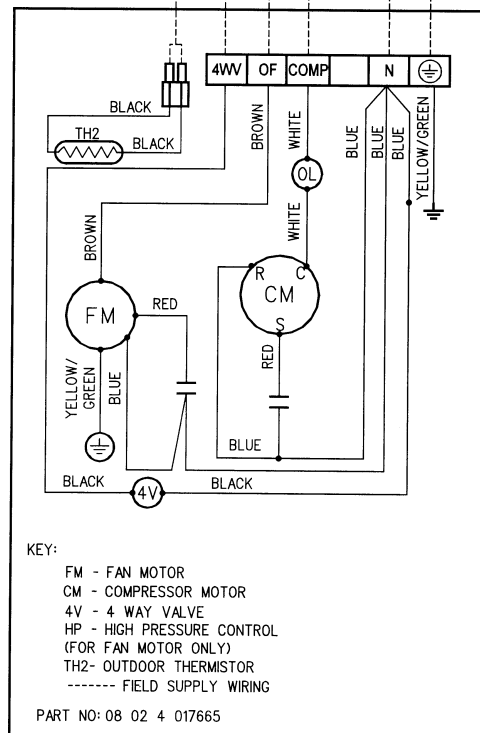
**Outdoor Unit**  
**Model : MLC030B**



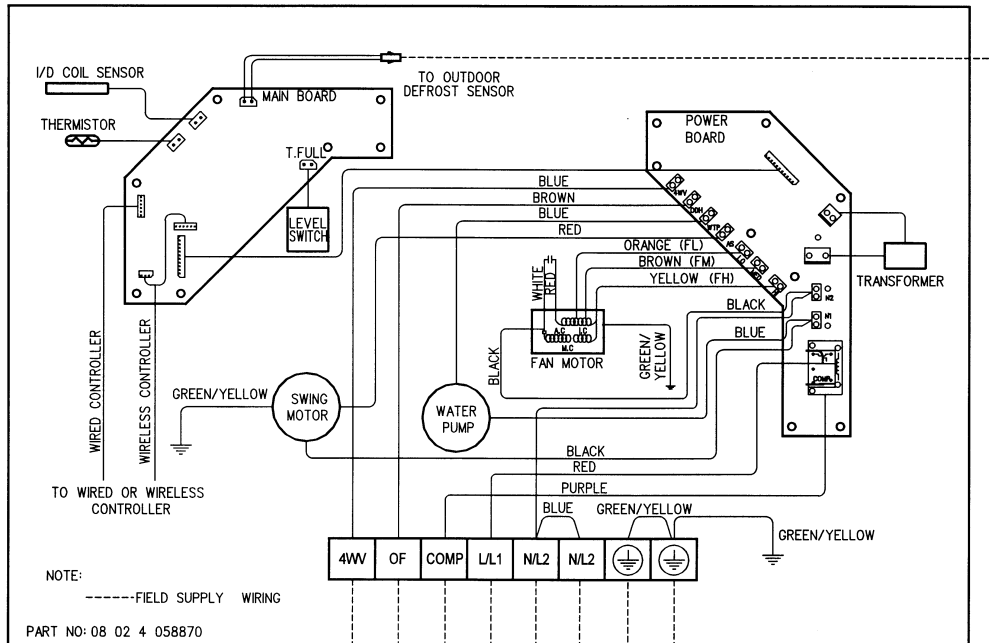
## Indoor Unit (Heat Pump) Model : MCK015BR



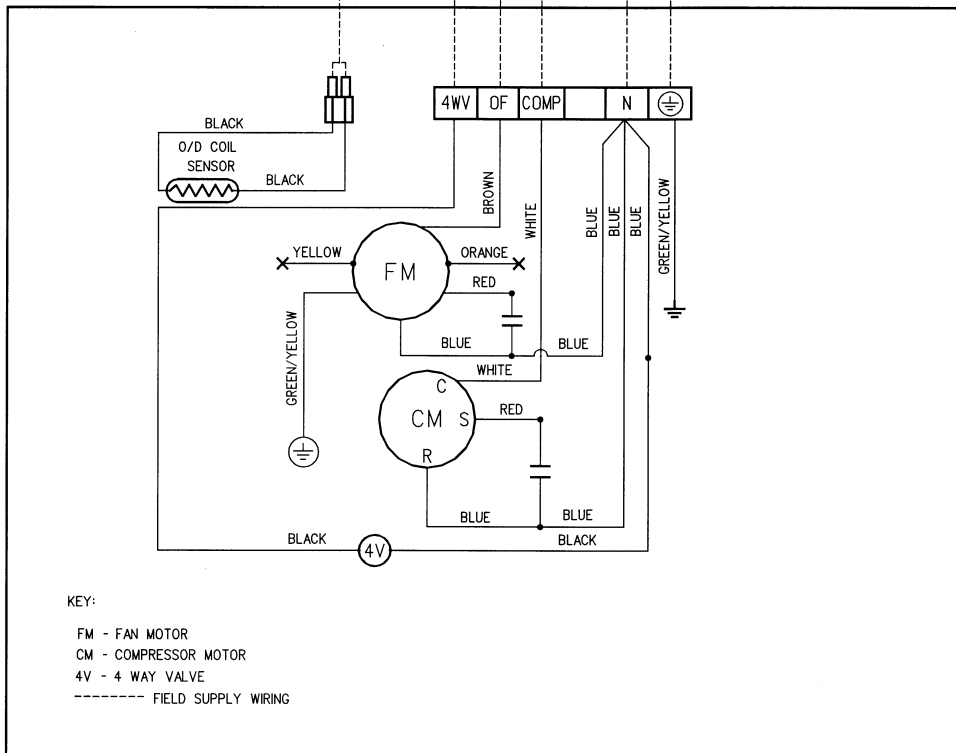
## Outdoor Unit Model : MLC015BR



## Indoor Unit (Heat Pump) Model : MCK020/ 025BR

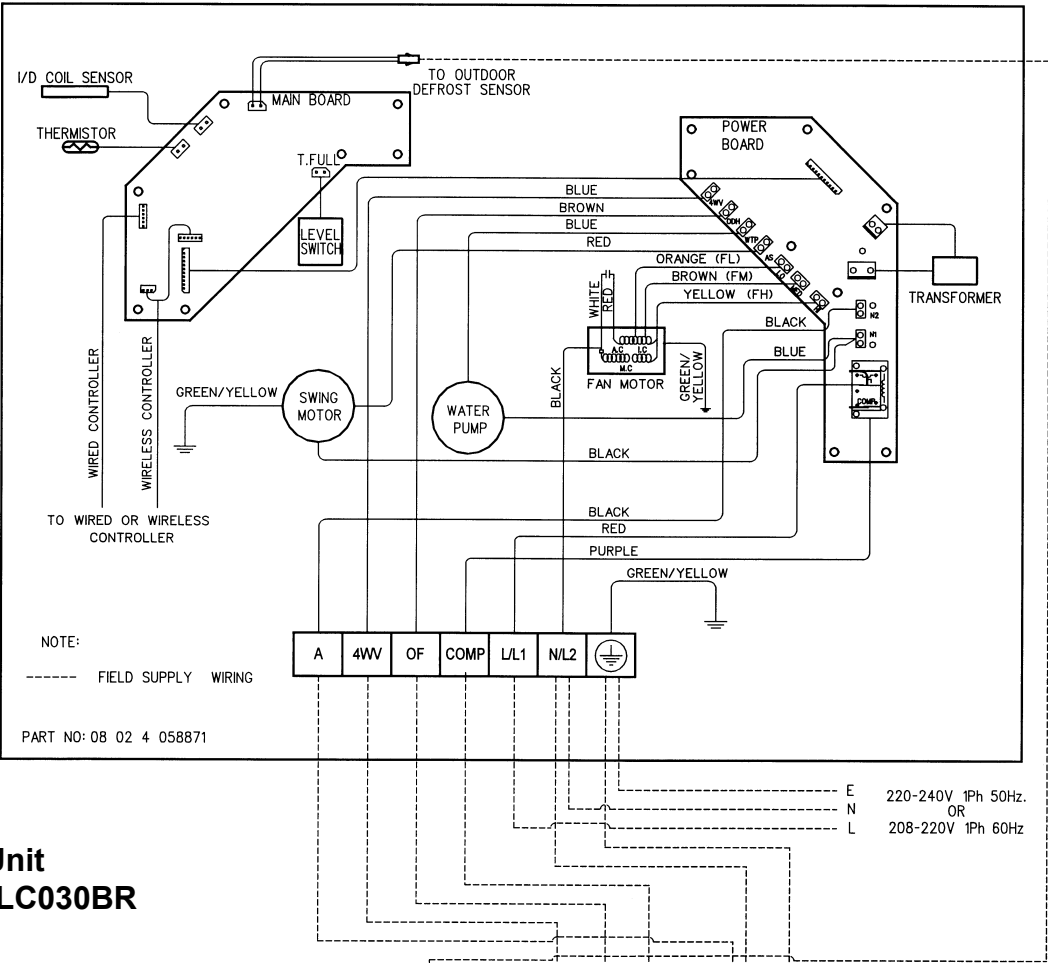


## Outdoor Unit Model : MLC020/ 025BR

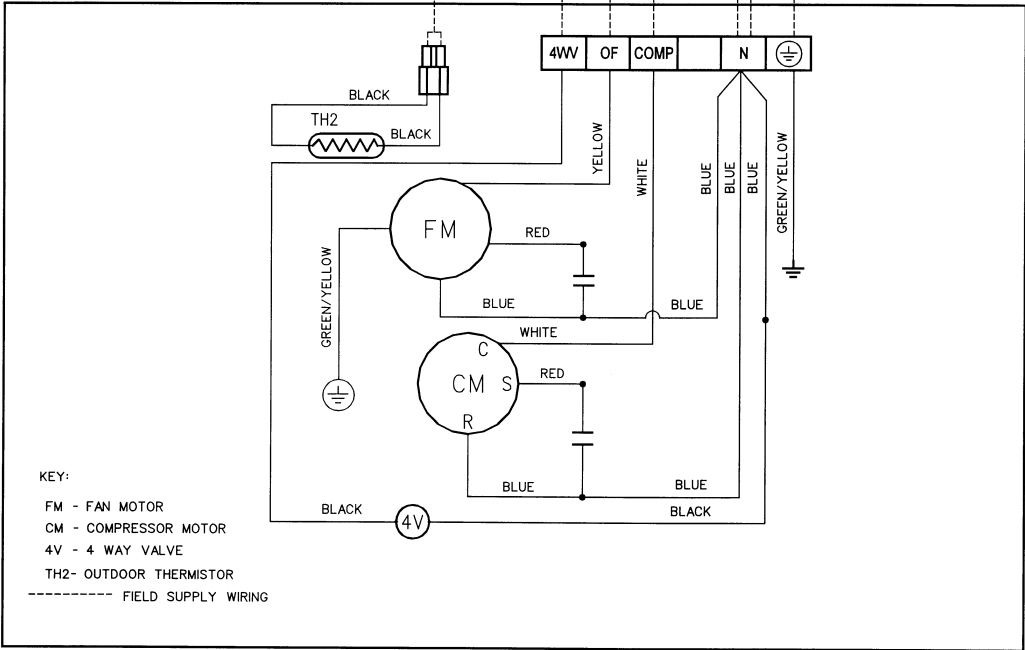




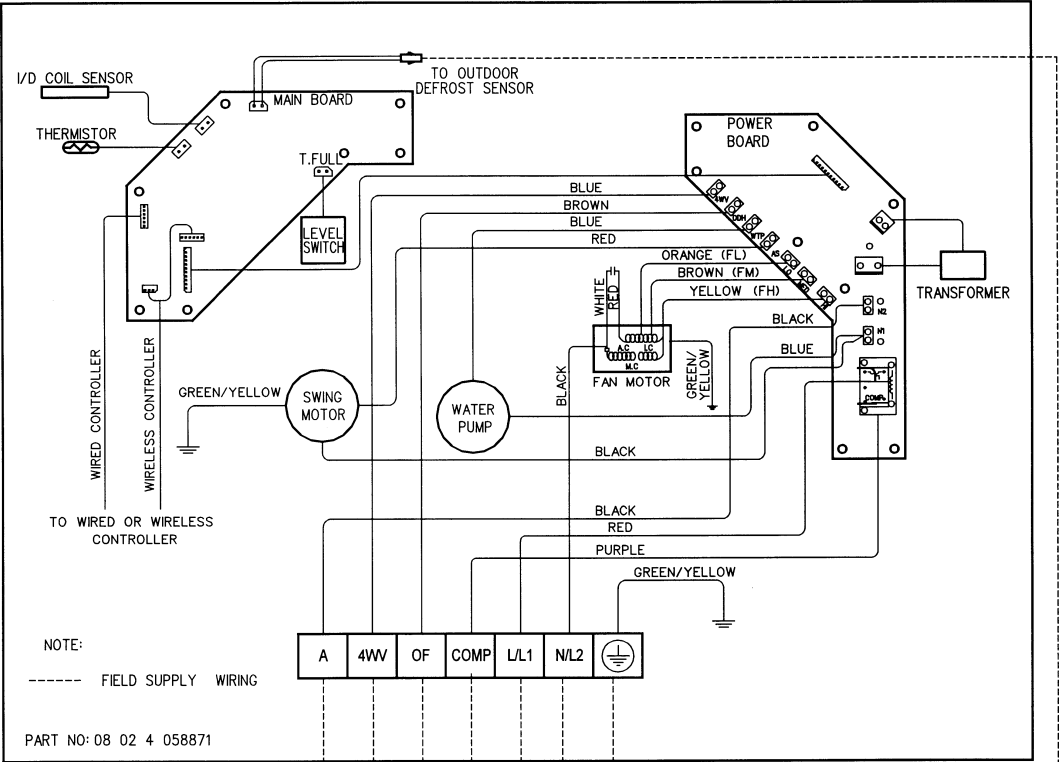
**Indoor Unit (Heat Pump)**  
**Model : MCK030BR**



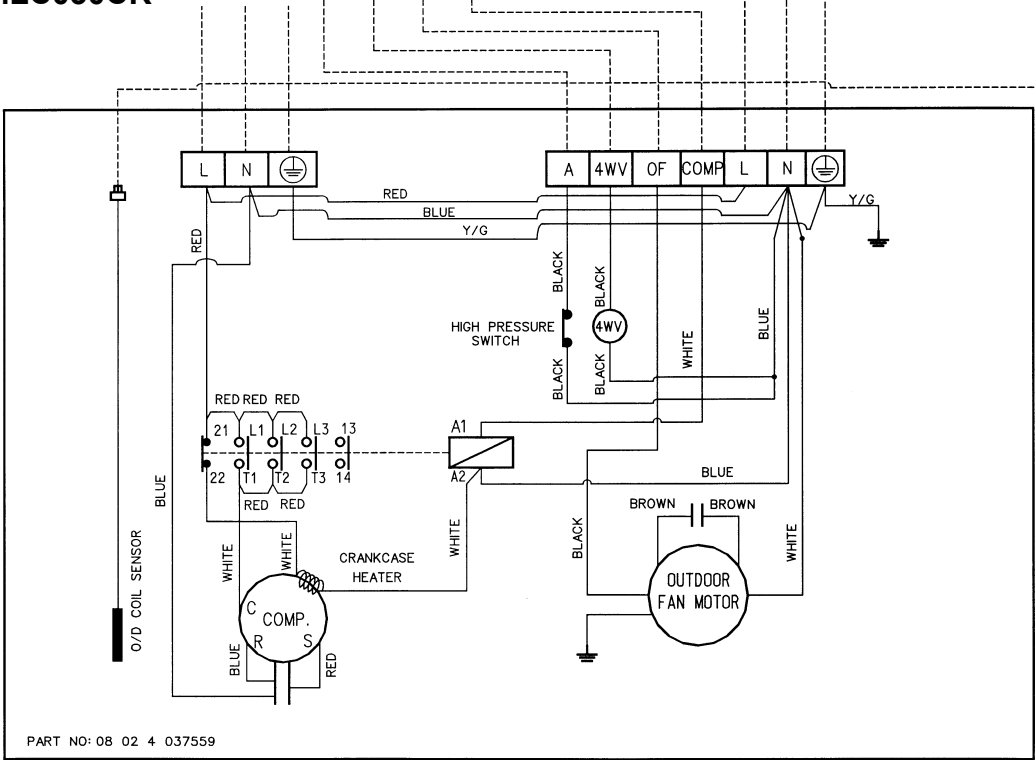
**Outdoor Unit**  
**Model : MLC030BR**



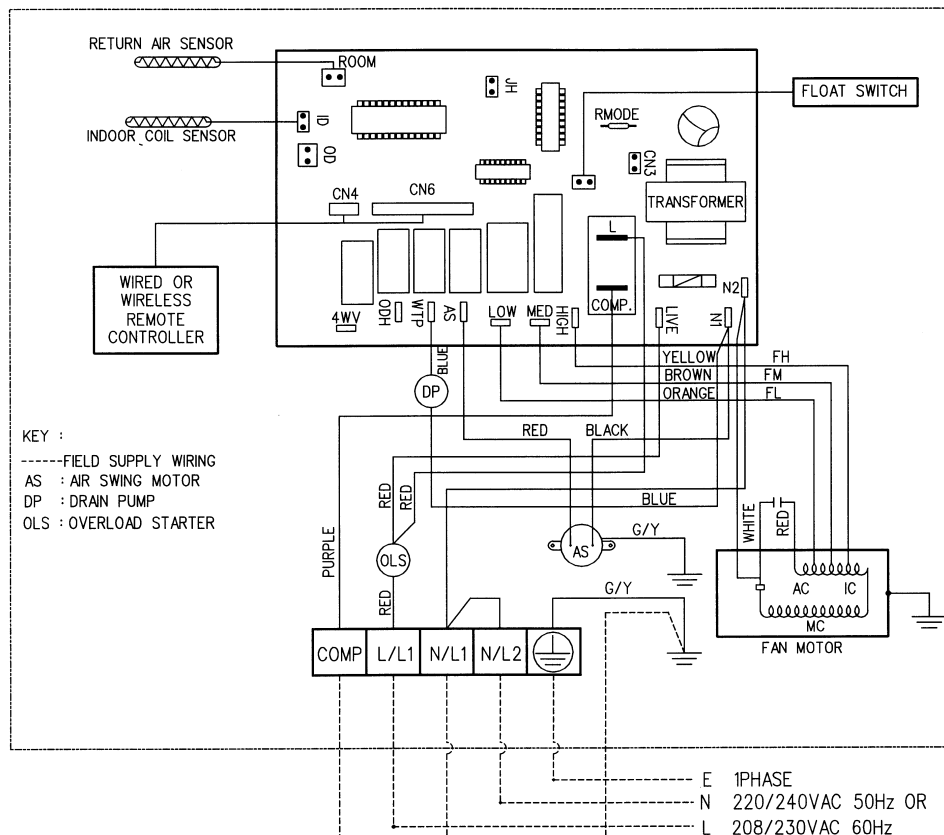
**Indoor Unit (Heat Pump)**  
**Model : MCK030BR**



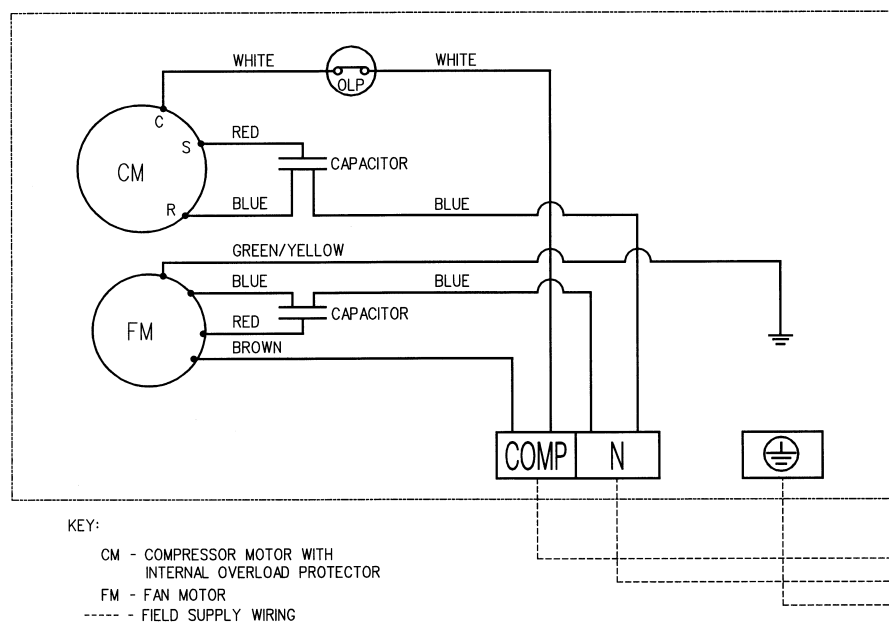
**Outdoor Unit**  
**Model : MLC030CR**



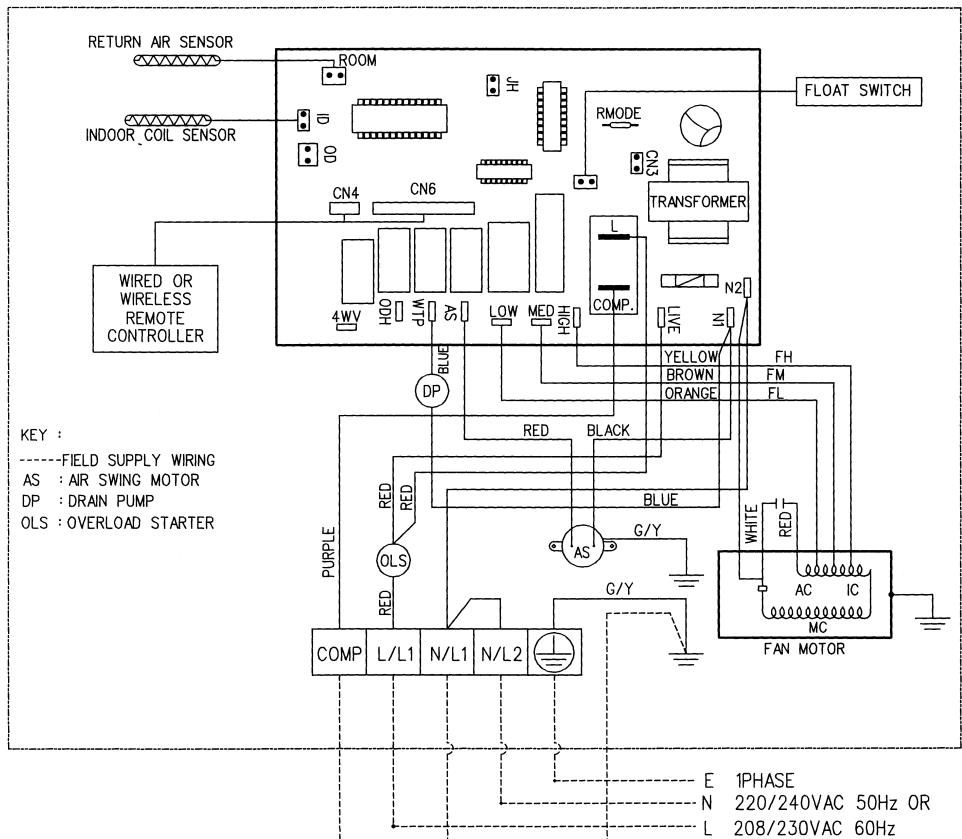
## Indoor Unit (Cooling Only) Model : MCK010/ 015C



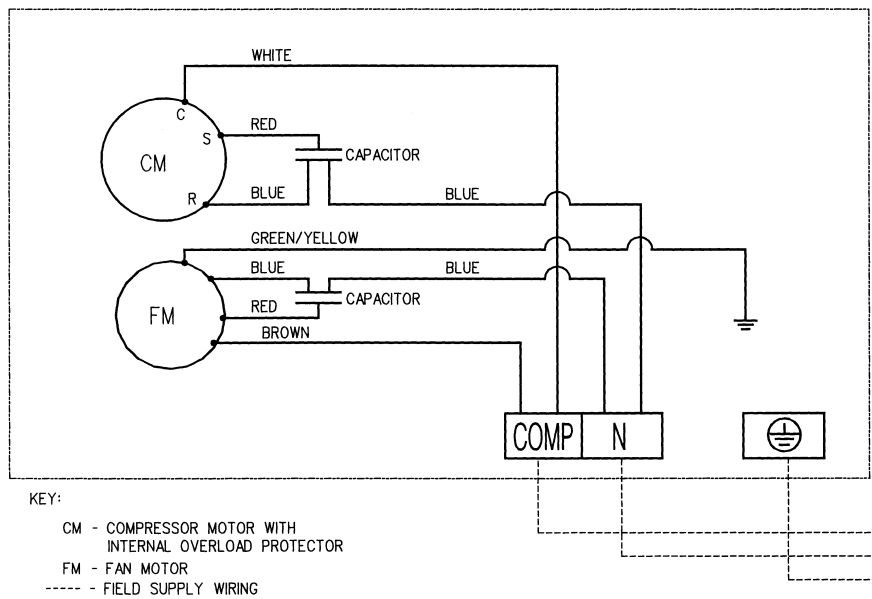
## Outdoor Unit Model : MLC010/ 015B



**Indoor Unit (Cooling Only)**  
**Model : MCK020C**

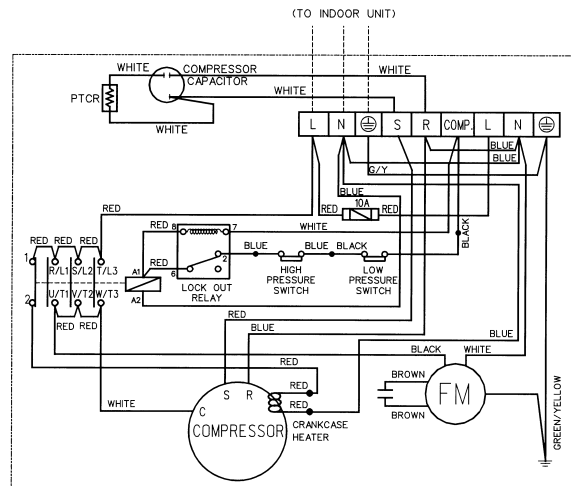


**Outdoor Unit**  
**Model : MLC020B**

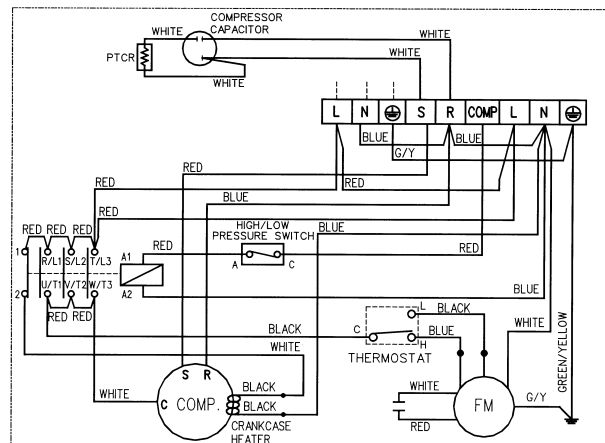


## Attachment 60HZ Outdoor Unit

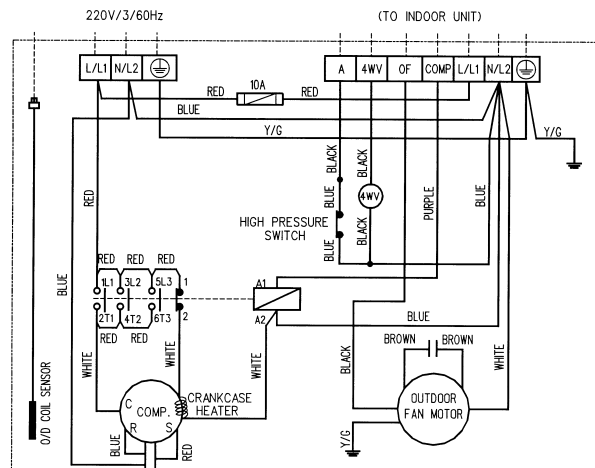
**Model : MLC030C (Cooling Only)**  
**60HZ / 1 Phase / 208 ~230V**



**Model : MLC040/ 050C (Cooling Only)**  
**60HZ / 3 Phase / 200 ~230V**



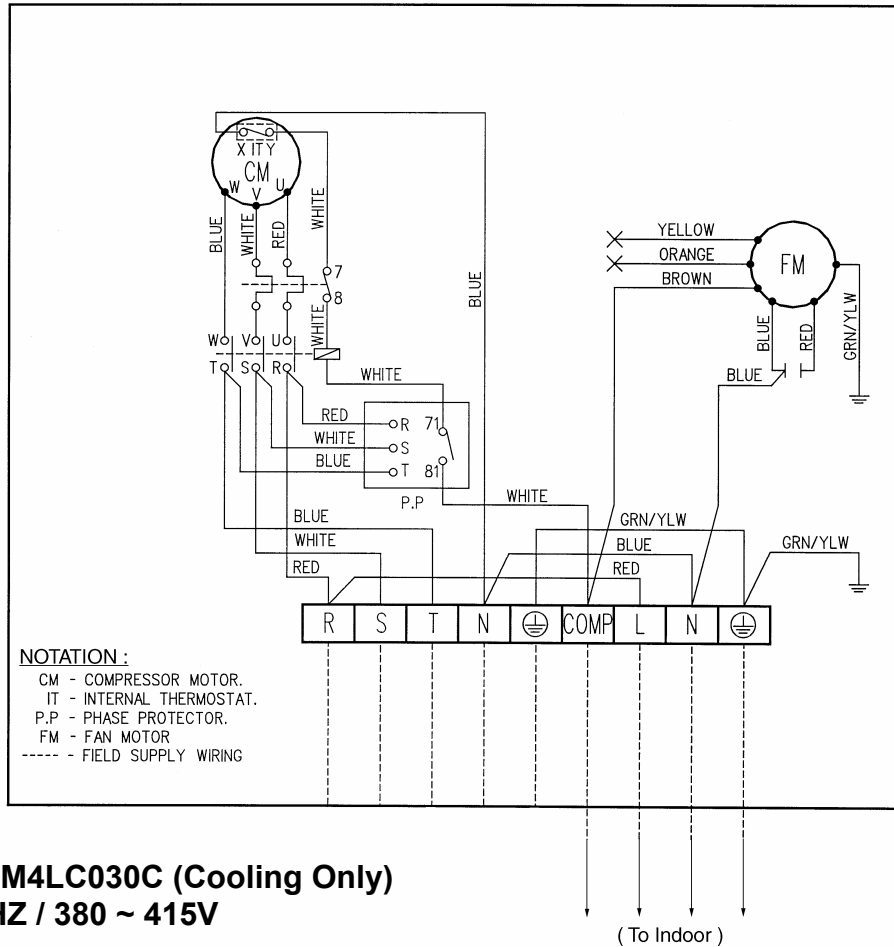
**Model : MLC040/ 050CR (Cooling Only)**  
**60HZ / 3 Phase / 200 ~230V**



### 3 Phase for 2 & 3 HP Outdoor Unit

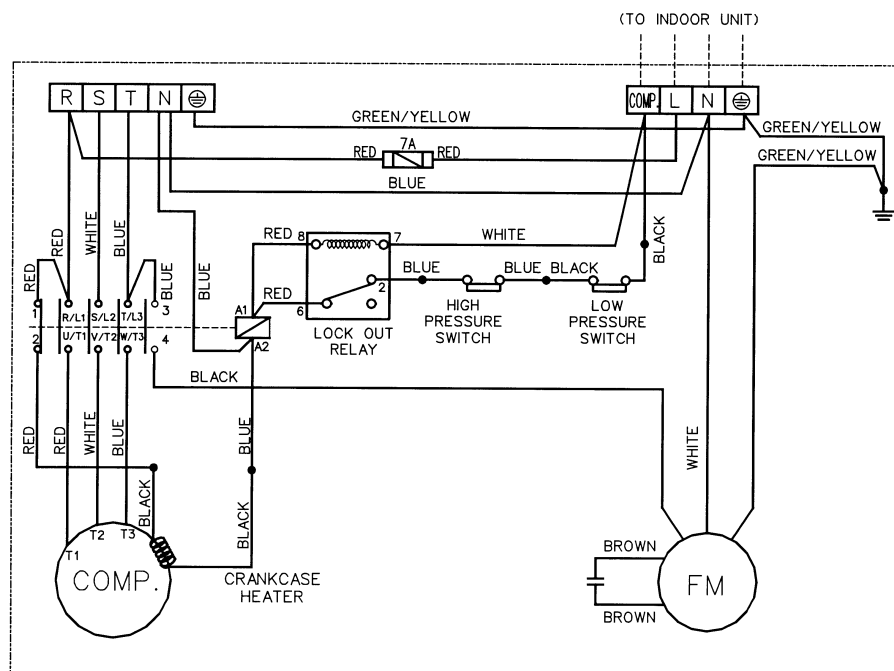
**Model : MLC/ M4LC020/ 025B (Cooling Only)**

**3 Phase / 50 HZ / 380 ~ 415V**

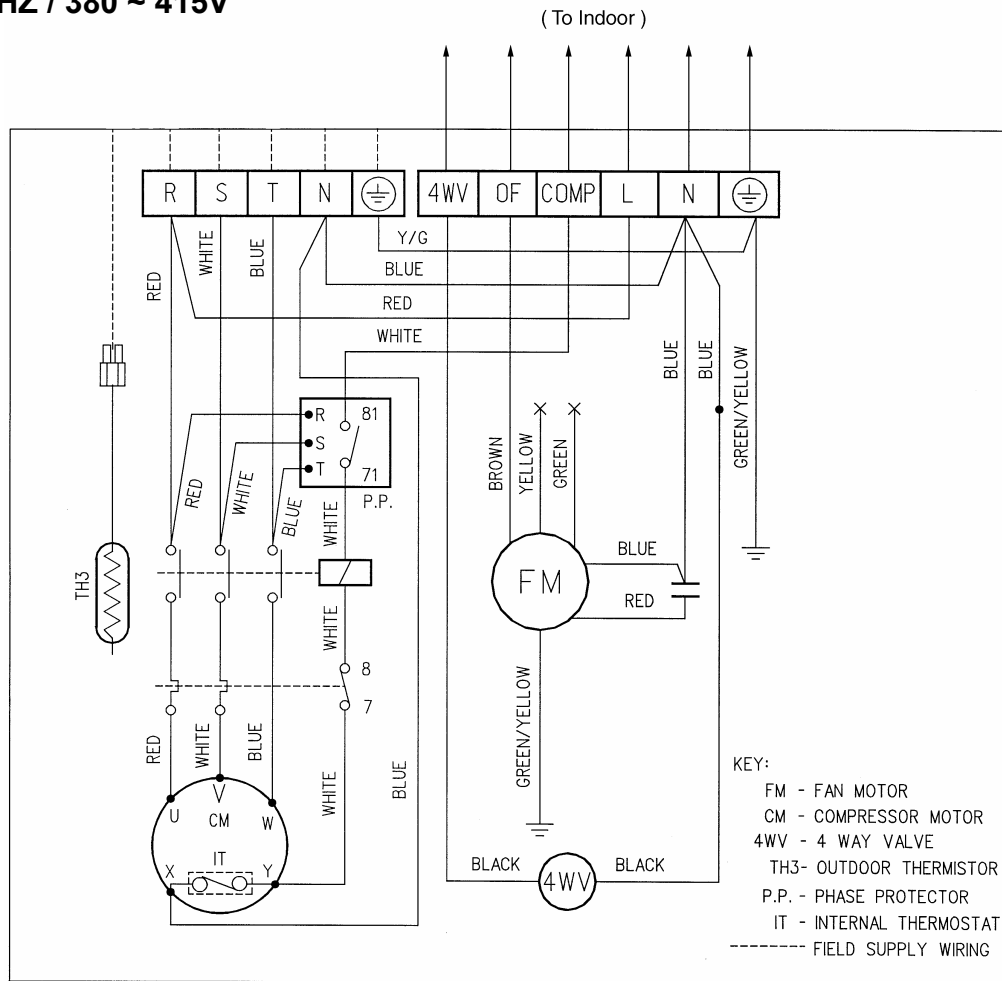


**Model : MLC/ M4LC030C (Cooling Only)**

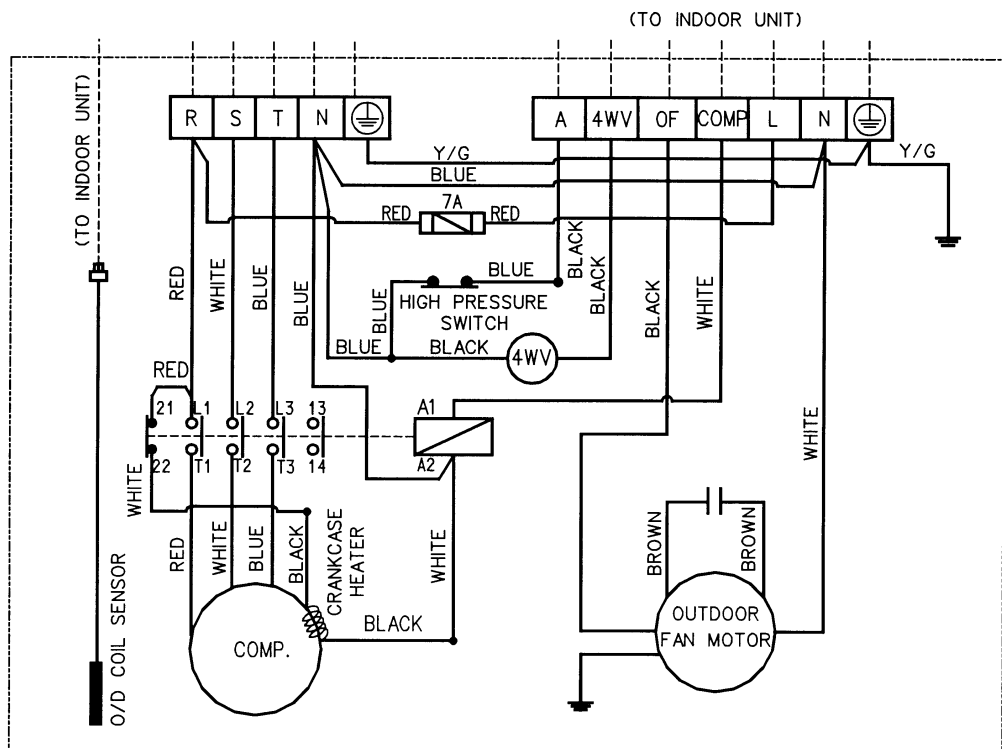
**3 Phase / 50 HZ / 380 ~ 415V**



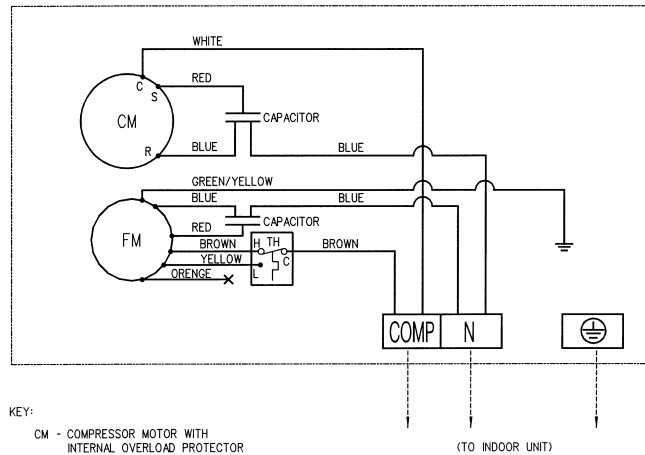
**Model : MLC/ M4LC020/ 025BR (Heat Pump)**  
**3 Phase / 50HZ / 380 ~ 415V**



**Model : MLC/ M4LC030CR (Heat Pump)**  
**3 Phase / 50HZ / 380 ~ 415V**

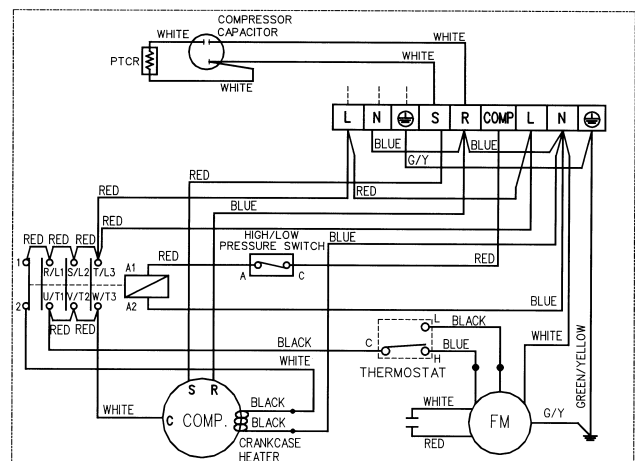
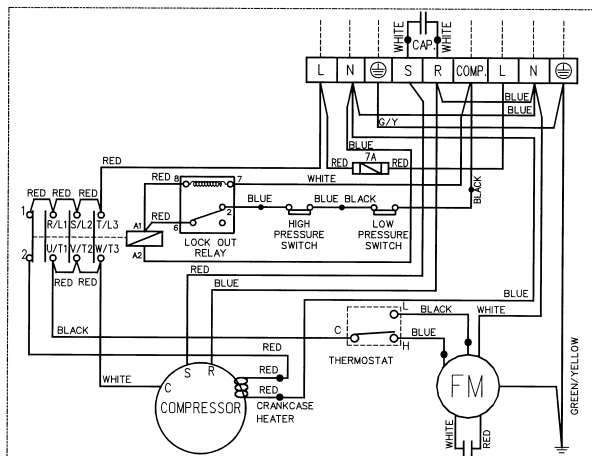


**High Ambient Unit**  
**Outdoor Unit**  
**Model : MLC020/ 025B (Cooling Only)**  
**50HZ / 1 Phase / 220 – 240V, 60HZ / 1 Phase / 208 – 230V**



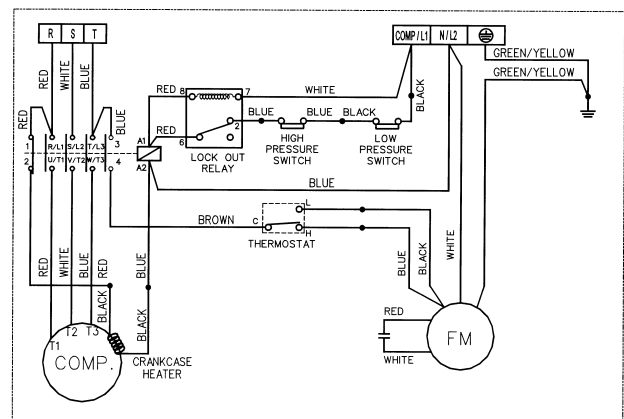
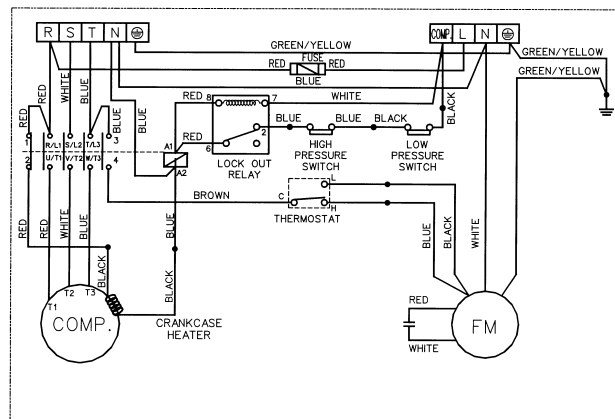
**Outdoor Unit**  
**Model : MLC030C (COOLING ONLY)**  
**50HZ / 1 Phase / 220 – 240V,**

**60HZ / 1 Phase / 208 – 230V**



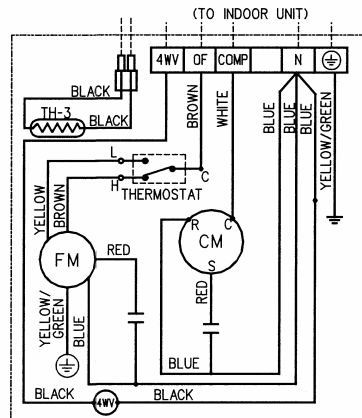
**Outdoor Unit**  
**Model : MLC040/ 050C (Cooling Only)**  
**50HZ / 3 Phase / 380 – 415V,**

**60HZ / 3 Phase / 200 – 230V**



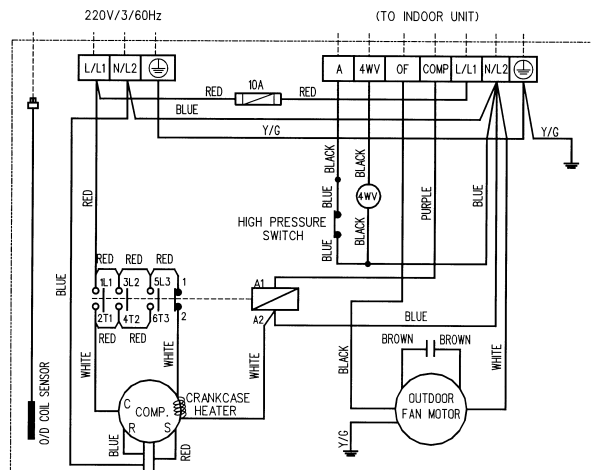


**Outdoor Unit**  
**Model : MLC020/ 025BR (Heat Pump)**  
**50HZ / 1 Phase / 220 – 240V**



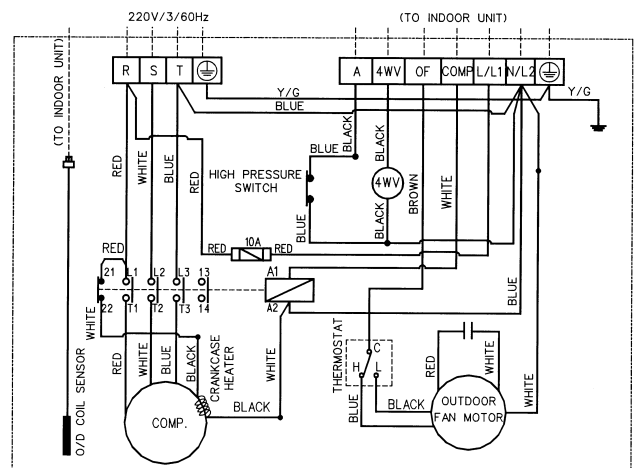
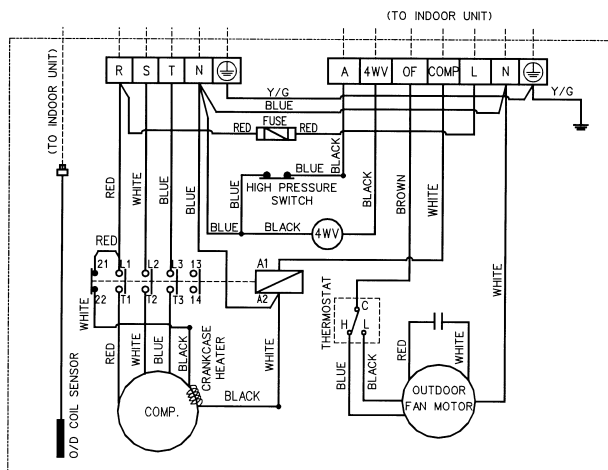
KEY:  
 FM - FAN MOTOR  
 CM - COMPRESSOR MOTOR  
 4WV - 4 WAY VALVE  
 TH3 - OUTDOOR THERMISTOR  
 ----- FIELD SUPPLY WIRING

**Outdoor Unit**  
**Model : MLC030CR**  
**50HZ / 1 Phase / 220 – 240V, 60 HZ / 1 Phase / 220V**



**Outdoor Unit**  
**Model : MLC040/ 050CR**  
**50HZ / 3 Phase / 380 – 415V,**

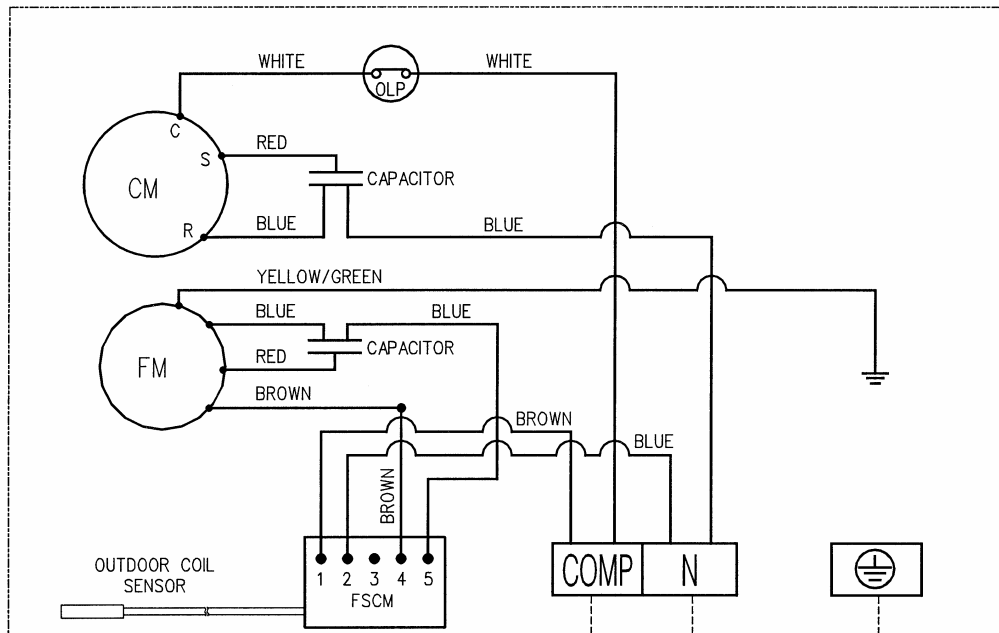
**60HZ / 3 Phase / 220V**



## Low Ambient Unit (Optional)

### Outdoor Unit

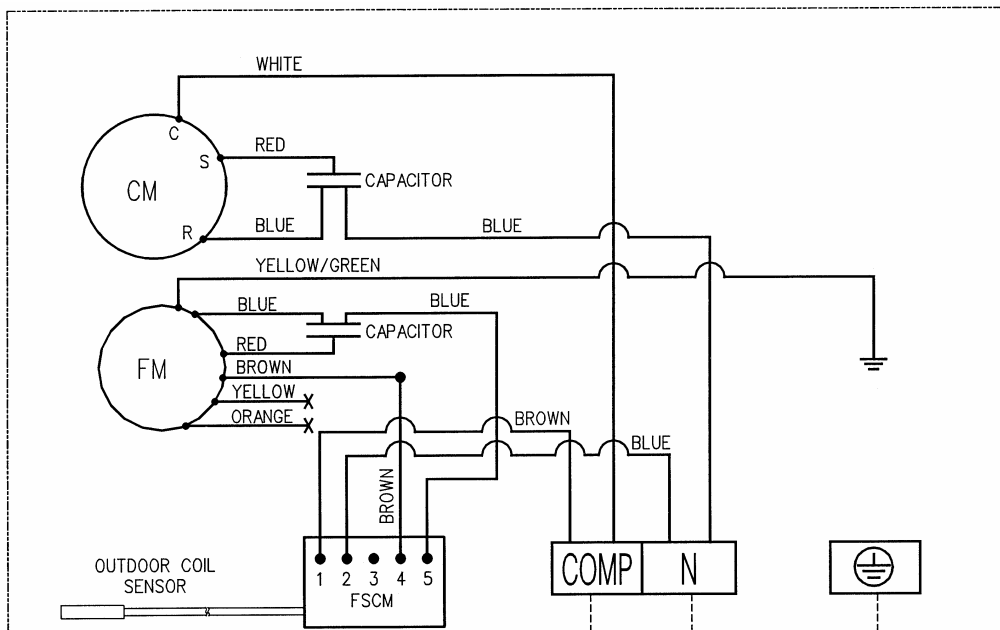
Model : MLC010B / 015B (50HZ)



KEY:  
 CM - COMPRESSOR MOTOR  
 FM - FAN MOTOR  
 OLP - OVERLOAD PROTECTOR  
 FSCM - FAN SPEED CONTROL MODULE  
 ----- FIELD SUPPLY WIRING

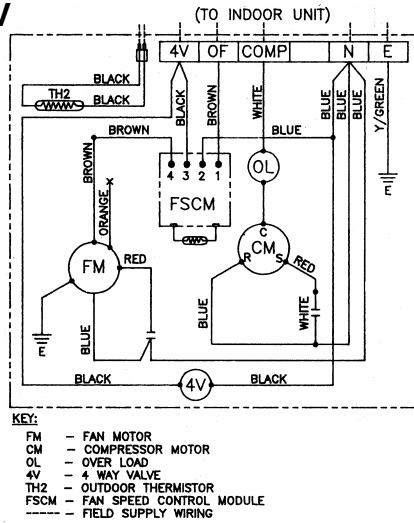
### Outdoor Unit

Model : MLC020B / 025B (50HZ)

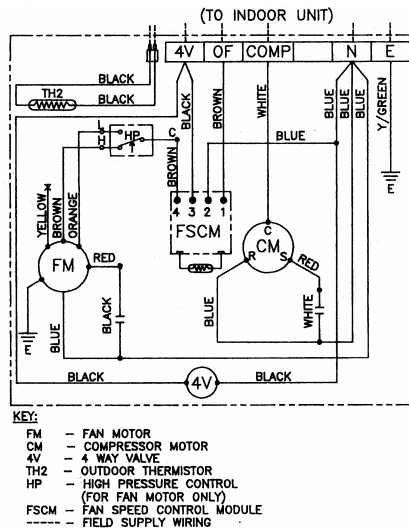


KEY:  
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 FM - FAN MOTOR  
 OLP - OVERLOAD PROTECTOR  
 FSCM - FAN SPEED CONTROL MODULE  
 ----- FIELD SUPPLY WIRING

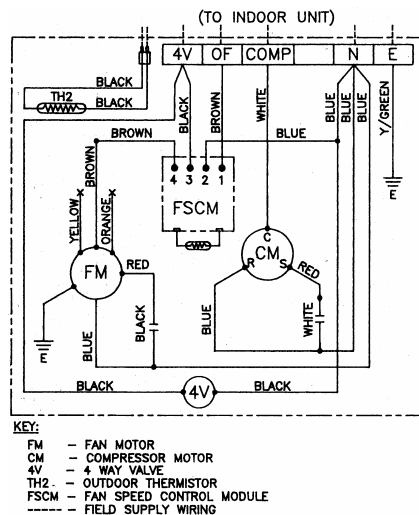
**Low Ambient Unit  
Outdoor Unit  
Model : MLC010/ 015BR  
50HZ / 1 Phase / 220 – 240V**



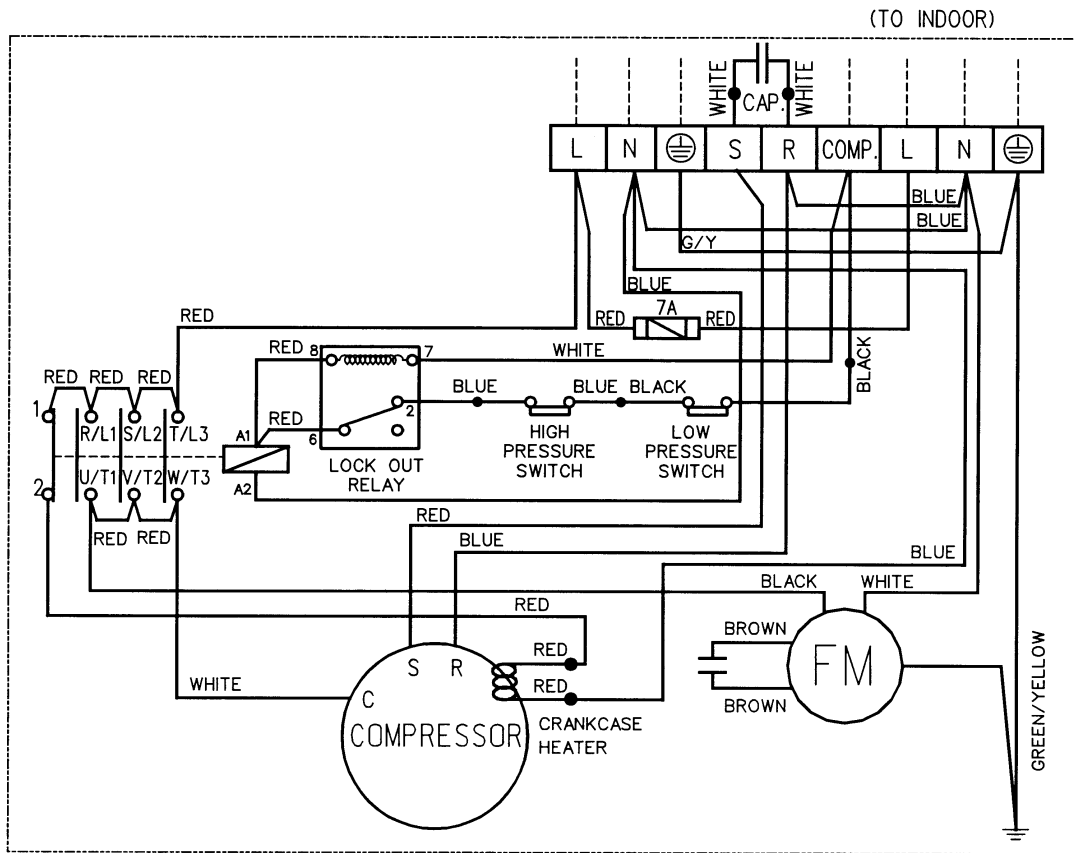
**Outdoor Unit  
Model : MLC020BR  
50HZ / 1 Phase / 220 – 240V**



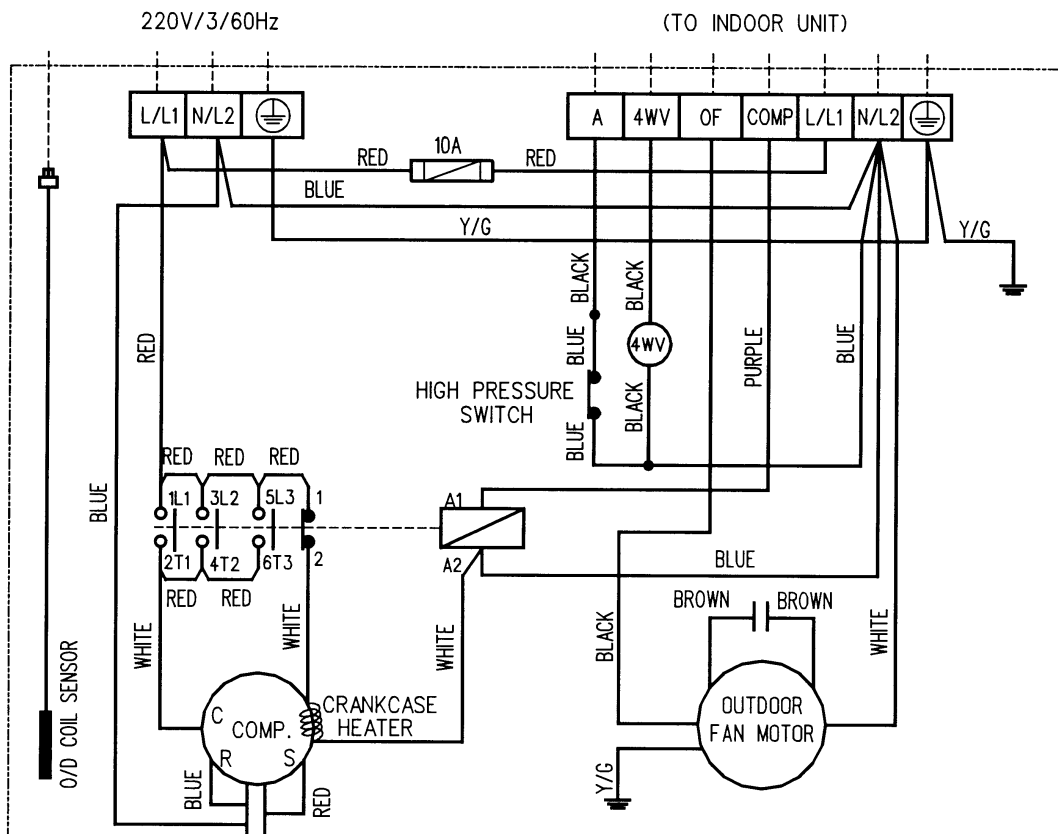
**Outdoor Unit  
Model : MLC025BR  
50HZ / 1 Phase / 220 – 240V**



**Single Phase for 4HP Outdoor Unit**  
**Model : MLC/ M4LC040C (Cooling Only)**



**Model : MLC/ M4LC040CR (Heat Pump)**



# Special Precautions for R407C

## Special precautions when dealing with refrigerant R407C unit

### 1) What is New Refrigerant R407C?

R407C is a zeotropic refrigerant mixture which has zero ozone depletion potential and thus conformed to the Montreal Protocol regulation. It requires Polyol ester oil (POE) oil for its compressor's lubricant. Its refrigerant capacity and performance are about the same as the refrigerant R22.

### 2) Components

Mixture weight composition R32(23%), R125(25%), R134a(52%)

### 3) Characteristic

- R407C liquid and vapor components have different compositions when the fluid evaporates or condenses. Hence, when leak occurs and only vapor leaks out, the composition of the refrigerant mixture left in the system will change and subsequently affect the system performance. If just additional refrigerant is added to leaked system, system performance will drop. It is recommended that the system should be evacuated thoroughly before recharging with R407C.
- When refrigerant R407C is used, the composition will differ depending on whether it is in gaseous or liquid phase. Hence when charging R407C, ensure that only liquid is being withdrawn from the cylinder or can. This is to make certain that only original composition of R407C is being charged into the system.
- POE oil is used as lubricant for R407C compressor, which is different from the mineral oil used for R22 compressor. Extra precaution must be taken not to expose the R407C system too long to moist air.

### 4) Check List Before Installation / Servicing

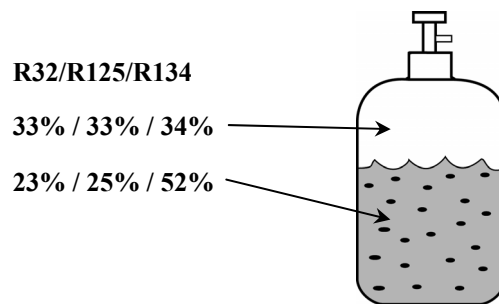
- Tubing  
Refrigerant R407C is more easily affected by dust or moisture compared with R22, make sure to temporarily cover the ends of the tubing prior to installation
- Compressor oil  
No additional charge of compressor oil is permitted.
- Refrigerant  
No other refrigerant other than R407C
- Tools  
Tools specifically for R407C only (must not be used for R22 or other refrigerant)
  - i) Manifold gauge and charging hose
  - ii) Gas leak detector
  - iii) Refrigerant cylinder/charging cylinder
  - iv) Vacuum pump c/w adapter
  - v) Flare tools
  - vi) Refrigerant recovery machine

### 5) Handling and Installation Guidelines

Like R22 system, the handling and installation of R407C system are closely similar. All precautionary measures; such as ensuring no moisture, no dirt or chips in the system, clean brazing using nitrogen, and thorough leak check and vacuuming are equally important requirements. However, due to zeotropic nature of R407C and its hygroscopic POE oil, additional precautions must be taken to ensure optimum and trouble-free system operation.

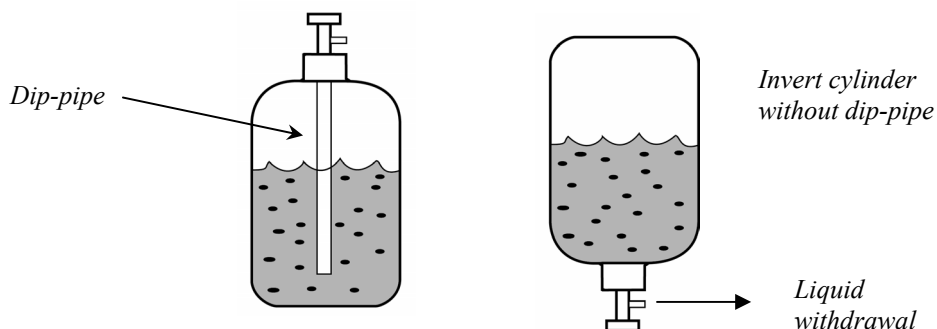
- a) Filter-dryer must be installed along the liquid line for all R407C air conditioners. This is to minimise the contamination of moisture and dirt in the refrigerant system. Filter-dryer must be of molecular sieve type. For a heat-pump system, install a two-way flow filter dryer along the liquid line.
- b) During installation or servicing, avoid prolong exposure of the internal part of the refrigerant system to moist air. Residual POE oil in the piping and components can absorb moisture from the air.

- c) Ensure that the compressor is not exposed to open air for more than the recommended time specified by its manufacturer (typically less than 10 minutes). Remove the seal-plugs only when the compressor is about to be brazed.
- d) The system should be thoroughly vacuumed to 1.0 Pa (-700mmHg) or lower. This vacuuming level is more stringent than R22 system so as to ensure no incompressible gas and moisture in the system.
- e) When charging R407C, ensure that only liquid is being withdrawn from the cylinder or can. This is to ensure that only the original composition of R407C is being delivered into the system. The liquid composition can be different from the vapor composition.



*Composition of R407C in vapor phase is different from liquid phase.*

- f) Normally, the R407C cylinder or can is being equipped with a dip-pipe for liquid withdrawal. However, if the dip-pipe is not available, invert the cylinder or can so as to withdraw liquid from the valve at the bottom.



- g) When servicing leak, the top-up method, commonly practiced for R22 system, is not recommended for R407C system. Unlike R22 where the refrigerant is of a single component, the composition of R407C, which made-up of three different components, may have changed during the leak. Consequently, a top-up may not ensure that the R407C in the system is of original composition. This composition shift may adversely affect the system performance. It is recommended that the system should be evacuated thoroughly before recharging with R407C.

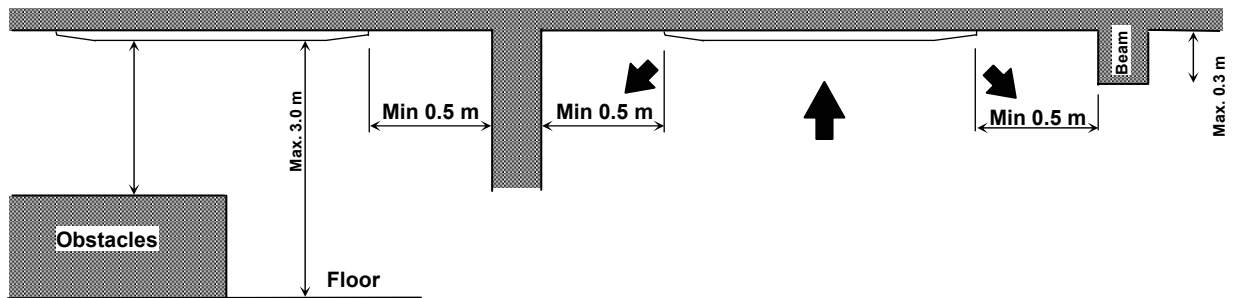
# Installation of Indoor Unit



**Caution :** Sharp edges and coil surfaces are potential injury hazard. Avoid from contact with them.

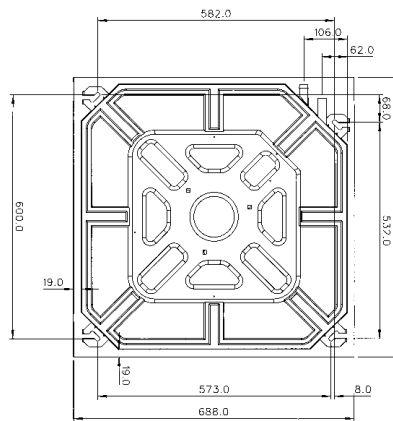
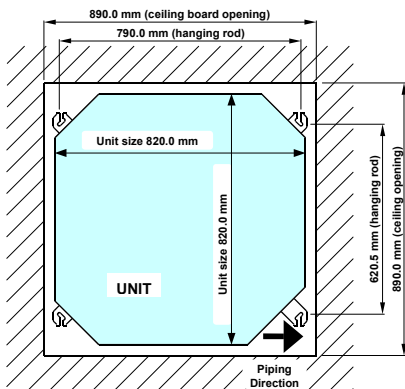
## Preliminary Site Survey

- Electrical supply and installation is to conform to local authority's (e.g. National Electrical Board) codes and regulations.
- Voltage supply fluctuation must not exceed  $\pm 10\%$  of rated voltage. Electricity supply lines must be independent of welding transformer which can cause high supply fluctuations.
- Ensure that the location is convenient for wiring, piping and drainage
- The indoor unit must be installed in such that free from any obstacles in path of cool air discharge and warm air return, and must allow spreading of air throughout the room (near the center of the room)
- Clearance must be provided for the indoor unit from the wall and obstacles as shown in the figure.

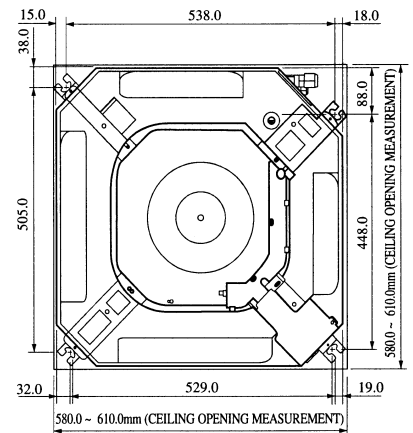


- The installation place must be strong enough to support a load of 4 times the indoor unit weight to avoid amplifying noise and vibration.
- The installation place (hanging ceiling surface) must be levelled and the height in the ceiling is 350 mm or more.

## Unit Installation



Ceiling board opening



### MCK-A

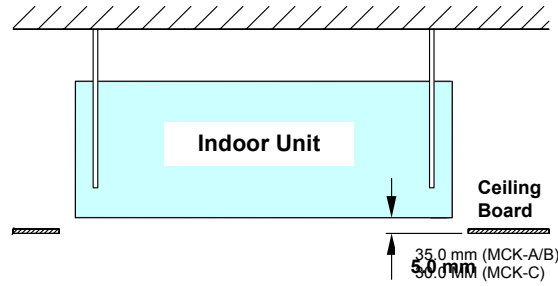
### MCK-B

### MCK-C

- The indoor unit must be away from heat and steam sources (avoid installing it near an entrance).
- Measure and mark the position for the hanging rod. Drill the hole for the angle nut on the ceiling and fix the hanging rod.
- The installation template is extended according to temperature and humidity. Check on dimensions in using.
- The dimensions of the installation template are same as those of the ceiling opening dimensions.
- Before ceiling laminating work is completed, be sure to fit the installation template to the indoor unit.

**Note:** Be sure to discuss the ceiling drilling work with the installers concerned.

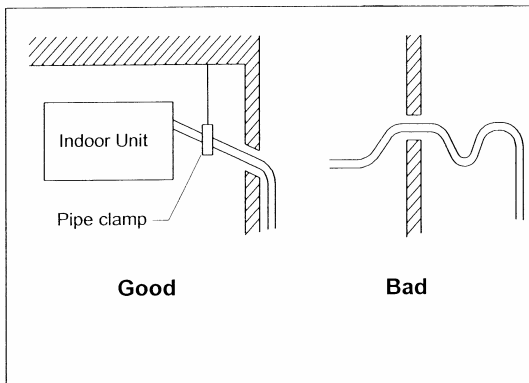
## Unit Hanging



### MCK-A/B/C

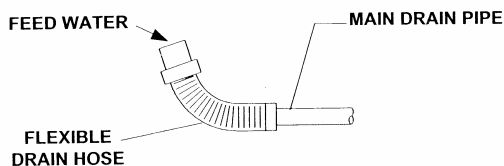
- Confirm the pitch of the hanging rod is 790.0mm X 620.5mm (MCK-A) / 600.0mm x 582.0 mm (MCK-B)/ 538.0 mm x 448.0 mm (MCK-C).
- Hold the unit and hang it on the hanging rod with the nut and washer.
- Adjust the unit height to 35.0 mm ( MCK-A/B) / 30.0mm (MCK-C) between the indoor unit bottom surface and the ceiling surface.
- Confirm with a level gauge that the unit is installed horizontally and tighten the nut and bolt to prevent unit falling and vibration.
- Open the ceiling board along the outer edge of the paper installation template.

## Drain Piping Work



- Drain pipe must be downward gradient for smooth drainage.
- Avoid the drain pipe from up and down slope to prevent reversal flow.
- During the drain piping connection, be careful not to exert extra force on the drain connector at indoor unit.
- The outside diameter of the drain connection at the flexible drain hose is 20 mm.
- Be sure to provide heat insulation (polyethylene foam with thickness more than 8.0 mm) on the drain piping to avoid the condensed water dripping inside the room.

## Drain Test



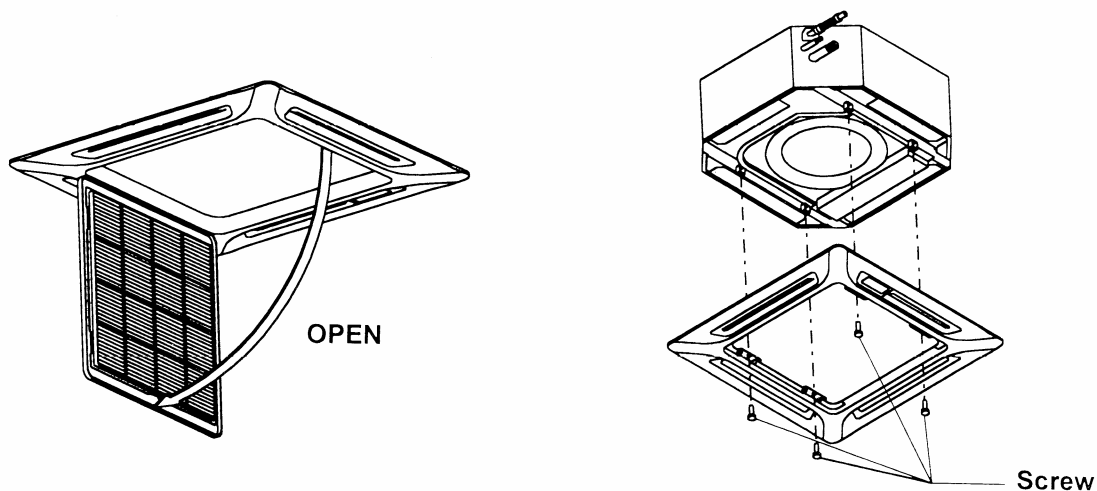
- Connect the main drain pipe to the flexible drain hose.
- Feed water from flexible drain hose and check the piping for leakage.
- When the test is completed, connect the flexible drain hose to the drain connector on the indoor unit.

**Note: This indoor unit use drain pump for condensed water drainage. Installed the unit horizontally to prevent water leakage or condensation around the air outlet.**

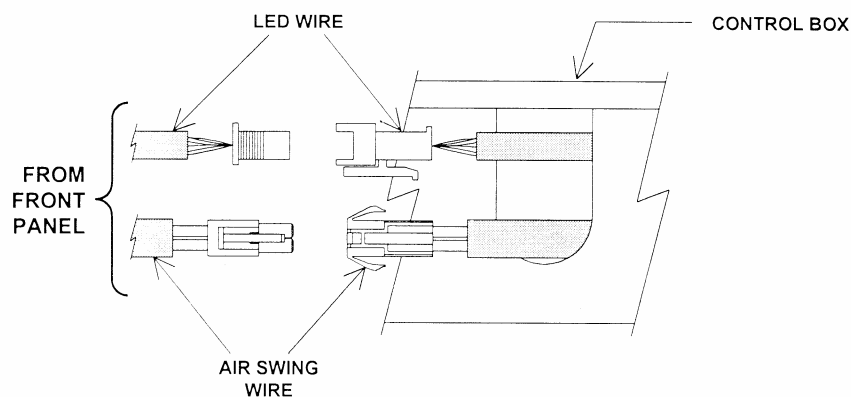


## Panel Installation

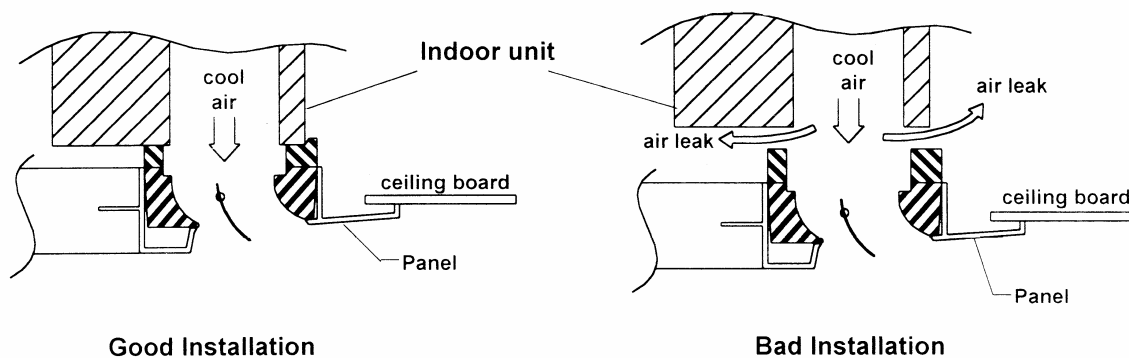
- The front panel can only be fitted in one direction, follow the piping direction. (Follow piping arrow sticker on front panel).
- Be sure to remove the installation template before installing the front panel.



- Open the air intake grille by pulling back the catchers and remove it together with filter from panel.
- Install the front frame panel onto the indoor unit by using 4 screws and tighten it completely to prevent cool air leakage.
- Connect the LED wire and air swing wire to the indoor unit (Optional).

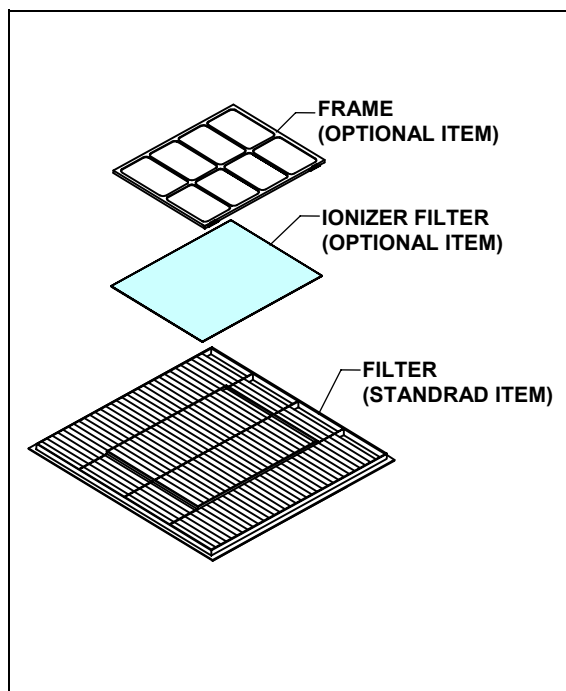


**Note: Install the front frame panel firmly to prevent cool air leakage which will cause condensation and water dripping.**



## Air Intake Grille Installation

- Before installed the air intake grille, make sure the air filter is clip properly to the air intake grille.
- Install the air intake grille together with the air filter to the front panel.
- The grille can be fit in any direction, when selecting direction, the ceiling design and grille operability should be considered.
- If the unit comes with ionizer filter (optional item), make sure to fix the ionizer filter to the air filter before installed the air intake grille.
- Fix the ionizer filter to the air filter with the black side on top and white side at bottom.
- Carefully clip on the ionizer filter frame.



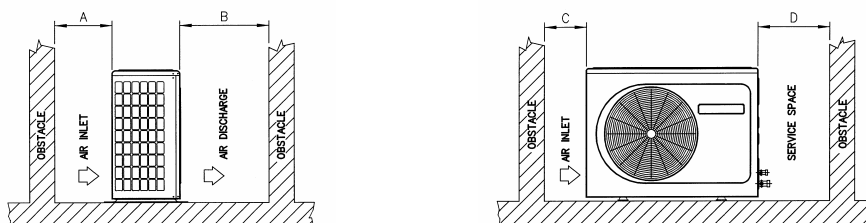
# Installation of Outdoor Unit

## Preliminary Site Survey

- A place protected from rain, direct sunlight and well-ventilated wherever practicable.
- A place capable of carrying the weight of the outdoor unit and isolating noise and vibration.
- A place where there are no obstruction of air flow into or out the unit.
- Do not put any object which may block/reduce the air flow into or out the outdoor unit.
- The location must not be susceptible to high concentration of dust, oil, salt or sulfide gas.

## Outdoor Unit Installation

Install the outdoor unit firmly and horizontally. Maintain a space clearance from the obstruction as shown in below for the purpose of servicing and air ventilation.



All Models	A	B	C	D
Minimum Distance	300 mm	1000 mm	300 mm	500 mm

**CAUTION :** If the condensing unit is operated in an atmosphere containing oils(including machine oils), salt(coastal area), sulphide gas(near hot spring, oil refinery plant), such substances may lead to failure of the unit.

# Refrigerant Piping Work

Refrigerant piping is important in particular. Refrigeration cycle of the split air conditioner is realized by the perfect piping work.

## Piping Length and Elevation

If the piping is too long, both the capacity and reliability of the unit will drop. As the number of bends increase, resistance to flow of refrigerant increases, thus lowering the cooling capacity and as a result overloading the compressor which may cause the compressor to become defective. Always choose the shortest path and follow the recommendation as tabulated below.

Model	Indoor	MCK015B/BR	MCK020A/AR MCK020B/BR	MCK025A/AR MCK025B/BR	MCK030A/AR MCK030B/BR		MCK040A/AR		MCK050A/AR
	Outdoor	MLC/ M4LC 015B/BR	MLC/M4LC 020B/BR	MLC/ M4LC 025B/BR	MLC030B/BR	MLC/ M4LC 030C/CR	MLC035C/CR	MLC/ M4LC 040C/CR	MLC/ M4LC 050C/CR
Max. length (m)		10	15	15	15	35	35	35	35
Max. elevation (m)		5	8	8	8	15	15	15	15
Max. no. of bends		10	10	10	10	10	10	10	10
Liquid pipe size		1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Gas pipe size		1/2"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"

Model	Indoor	MCK010C/CR	MCK015C/CR	MCK020C/CR
	Outdoor	MLC00B/BR	MLC015B/BR	MLC020B/BR
Max. length (m)		12	12	15
Max. elevation (m)		5	5	8
Max. no. of bends		10	10	10
Liquid pipe size		1/4"	1/4"	1/4"
Gas pipe size		3/8"	3/8"	5/8"

Remark: The refrigerant pre-charged in the outdoor unit is for piping length up to 7.62m

## Piping Connection

Do not use contaminated or damaged copper tubing. If piping for evaporator or condenser are exposed or had been opened for 15 seconds or more, vacuum and purge with field supplied refrigerant. Generally, do not remove plastic, rubber plugs and brass nuts from valves, fittings, tubing and coils until it is ready to do the connection for suction and liquid line.

If any brazing work is required, ensure that nitrogen gas is passed through coil and joints while brazing work is being carried out. This will eliminate soot formation on the inside wall of copper tubing.

Cut the pipe stage by stage, advance the blade of pipe cutter slowly. Extra force and deep cut will cause more distortion of pipe and therefore produce extra burr.

Remove burrs from cut edges of pipes with a remover. This will avoid unevenness on the flare face which will cause gas leak.

Align the center of the piping and sufficiently tighten the flare nut with fingers. Finally, tighten the flare nut with torque wrench until the wrench clicks.

Be sure to execute heat insulation (polyurethane form with thickness more than 15 mm).

Except the outdoor unit which is pre-charged with refrigerant, the indoor unit and the refrigerant connection pipes must be purged because the air that contain moisture remaining in the refrigerant cycle may cause malfunction to the compressor.

## Additional Charge

The refrigerant is pre-charged in the outdoor unit, but additional charge of refrigerant after vacuuming is necessary. Follow the recommendation as tabulated below.

## Cooling only

MODEL	INDOOR	MCK020A	MCK025A	MCK030A	MCK040A	MCK050A
	OUTDOOR	MLC020B	MLC025B	MLC030C	MLC040C	MLC050C
L ≤ 5 m		0.250	0.100	0.400	-	-
L = 7 m		0.280	0.176	0.600	0.100	0.100
L = 10 m		0.325	0.290	0.650	0.250	0.250
L = 15 m		0.400	0.480	0.900	0.500	0.500
L = 20 m		-	-	1.150	0.750	0.750
L = 35 m		-	-	1.500	1.500	1.500

## Heat pump

MODEL	INDOOR	MCK020AR	MCK025AR	MCK030AR	MCK040AR	MCK050AR
	OUTDOOR	MLC020BRK	MLC025BRK	MLC030CR	MLC040CR	MLC050CR
L = 7 m		0.050	0.100	0.100	0.100	0.100
L = 10 m		0.075	0.500	0.250	0.250	0.250
L = 15 m		0.150	0.750	0.500	0.500	0.500
L = 20 m		-	-	0.750	0.750	0.750
L = 35 m		-	-	1.500	1.500	1.500

## Cooling only

MODEL	INDOOR	MCK015B	MCK020B	MCK025B	MCK030B	
	OUTDOOR	MLC015B	MLC020B	MLC025B	MLC030B	MLC030C
L ≤ 5 m		0.250	0.250	0.100	0.100	0.400
L = 7 m		0.300	0.280	0.176	0.200	0.600
L = 10 m		0.325	0.325	0.290	0.350	0.650
L = 15 m		0.400	0.400	0.480	0.600	0.900
L = 20 m		-	-	-	0.850	1.150

## Heat pump

MODEL	INDOOR	MCK015BR	MCK020BR	MCK025BR	MCK030BR
	OUTDOOR	MLC015BR	MLC020BR	MLC025BR	MLC030CR
L = 7 m		0.050	0.050	0.100	0.100
L = 10 m		0.075	0.075	0.500	0.250
L = 15 m		0.150	0.150	0.750	0.500
L = 20 m		-	-	-	0.750

## Cooling only

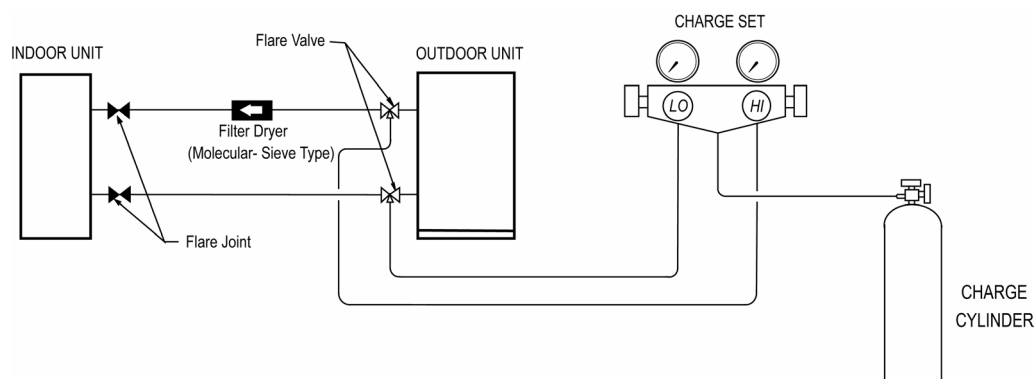
Model	Indoor	MCK010C	MCK015C	MCK020C
	Outdoor	MLC010B	MLC015B	MCK020B
L = 10m		-	-	-
L = 12m		0.036kg	-	0.021kg
L = 15m		-	-	0.066kg

## Heat pump

Model	Indoor	MCK010CR	MCK015CR	MCK020CR
	Outdoor	MLC010R	MLC015BR	MLC020BR
L = 10m		-	0.030kg	-
L = 12m		0.055kg	0.080kg	-
L = 15m		-	-	0.065kg

All refrigerant charge is in kg

Diagram shows typical charging method



### **CAUTION FOR R407C**

Avoid prolong exposure of an opened compressor, or the internal part of refrigerant piping to moist air. The POE oil in the compressor and piping can absorb moisture from air.

## **Electrical Connections**

# **Wiring**

Wiring regulations on wire diameters differ from country to country. Please refer to your LOCAL ELECTRICAL CODES for field wiring rules. Be sure that installation is complied with such rules and regulations.

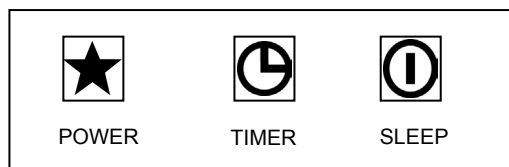
### **General Precautions**

- Ensure that the rated voltage of the unit corresponds to the nameplate before carrying out proper wiring according to the wiring diagram.
- Provide a power outlet to be used exclusively for each unit. A power supply disconnect and a circuit breaker for over current protection should be provided in the exclusive line.
- All wiring must be GROUNDED to prevent possible hazards due to insulation failures.
- All wiring must be firmly connected.
- All wiring must not come in contact with the hot refrigerant piping, compressor or any moving parts of fan motors.

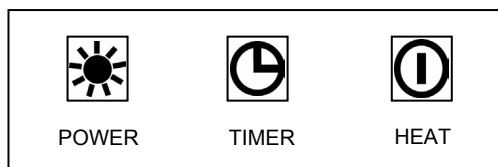
# Indicator Lights





## Wireless Remote Control (Universal Board)

Cooling : LED Indicator Light Display



Heatpump : LED Indicator Light Display



 POWER	 TIMER	 SLEEP	 HEAT	Operation / Faulty Indication
○	○			Timer on
○		○		Sleep mode on
○			○	Heat mode
⊙ Continuously			○ / ●	Frost prevention mode
⊙ Once every 3 sec				Compressor overload
⊙⊙ Twice every 3 sec				Pump fault
⊙⊙⊙ 3 Times every 3 sec				Gas leak
⊙⊙⊙⊙ 4 Times every 3 sec				Room/indoor/outdoor coil sensor contact loose/short

○ ON      ○ / ● ON OR OFF      ⊙ BLINKING

## Wired Remote Control (Universal Board)

Cooling / Heat Pump Model

Error Code at 7 Segment Display	Operation / Faulty Indication
<b>E1</b> Blinking	Room Sensor Contact Loose / Short
<b>E2</b> Blinking	Indoor Coil Sensor Contact Loose / Short
<b>E3</b> Blinking	Outdoor Coil Sensor Contact Loose / Short
<b>E4</b> Blinking	Compressor Overload
<b>E5</b> Blinking	Gas Leak
<b>E6</b> Blinking	Pump Faulty
Heat LED Blinking	Outdoor Defrost ( For Heatpump Only)

### Water Pump

The water pump will on if compressor is on during cooling cycle. The pump will remain on for at least 5 minutes after the compressor is off.

During mode change from cooling to non-cooling mode, the pump will on for minimum 5 minutes. During defrost cycle, the pump will on and will on for another 5 minutes once the defrost cycle is terminated.

### Water level Switch

This normally close switch is to detect faults in water pump system. It will confirm for 30 seconds for switch open and 60 seconds for switch close.

Once switch is confirmed open, it will force compressor to cut off. If the switch is closed within 5 minutes, the compressor is allowed to cut in. If the switch does not close for more than 5 minutes, the system will warn user regarding the fault, the compressor is not allowed to cut in. If the switch is confirmed opened twice within 30 minutes, the system assumes there are faults.

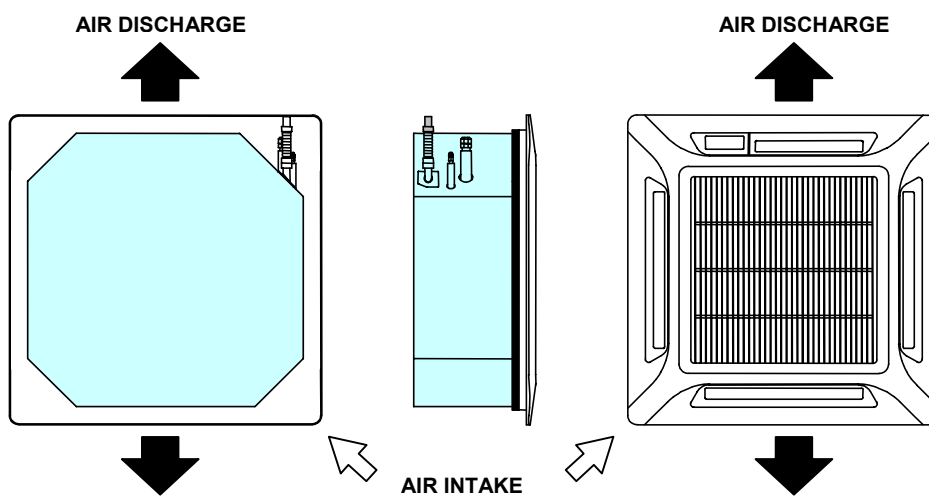
# Accessory Parts

## Fresh Air Intake for MCK-A Model

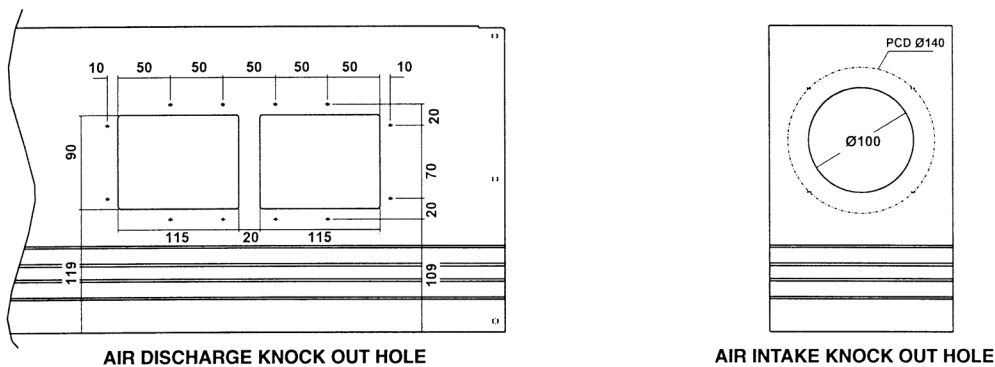
### Short Duct Specification

- The indoor unit is provided with air discharge and air intake "knock-out". hole for duct connection. However the connection of the short duct for air discharge is possible on only one side.
- The use of short duct for air discharge will improve airflow distribution if there is an obstruction (such as alighting fixture) or in a long, narrow room or an L-shaped room. It is also used for air conditioning of two rooms simultaneously.

### Possible Direction for Air Discharge and Air Intake

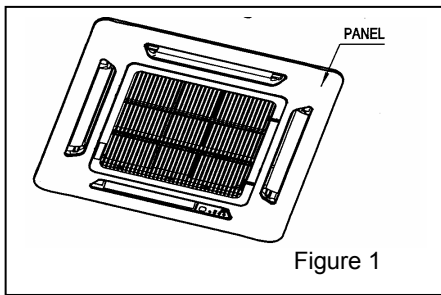


### Possible Opening Dimension for Duct Connection

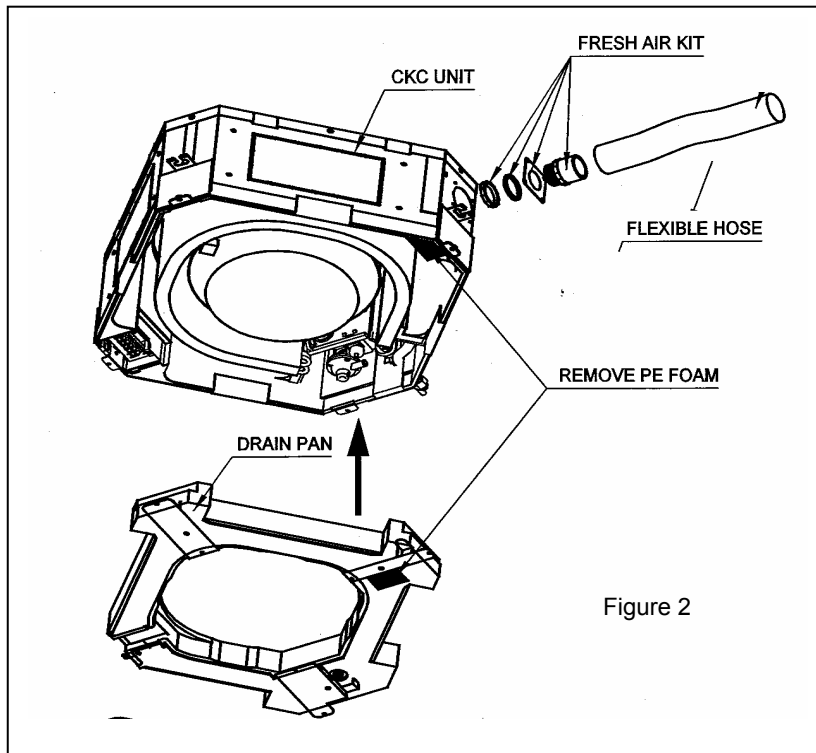


- Note :**
1. Avoid to use the short duct on which the air discharge grille can be completely closed, to prevent evaporator freezing.
  2. In order to prevent condensation forming, be sure that there is sufficient thermal insulation and no leakage of cool air when installing the short duct.
  3. Keep the introduction of fresh air intake within 20% of total air flow. Also provide a chamber and use a booster fan.

## Fresh Air Intake for MCK-C Unit



Take off the panel from the indoor unit.

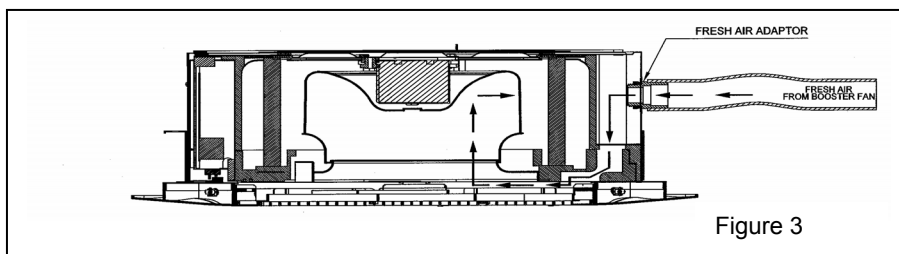


Remove the PE foam from the drain pan and another one on the unit.

Remove the pre-punched panel on the CKC unit with a screwdriver.

Then, fix the fresh air kit (refer to parts list) to the hole.

Finally, a flexible duct is connected to let the fresh air moving in.



The direction of fresh air intake is shown as figure 3.



## Sealing Material

- It is possible to seal one of the four air discharge outlet (sealing two or more air discharge outlet could cause a malfunction).
- Remove the front panel and inserting the seal material into the air discharge outlet at the indoor unit to seal the air outlet.
- The sealing material is the same length as the longer air discharge outlet. If it is desired to seal the shorter air discharge outlet, cut the sealing material to shorten it.
- Push the sealing material in about 10 mm beyond the bottom surface of the indoor unit so that it does not touch the air louver. Be sure not to push the sealing material in any farther than about 10 mm.

## Overall Checking

- Ensure the following in particular:
  - 1) The unit is mounted solidly and rigidly in position.
  - 2) Piping and connections are leak proof after charging.
  - 3) Proper wiring has been done.
- Drainage check - pour some water into the main drain pipe from the flexible drain hose.
- Test run
  - 1) Conduct a test run after water drainage test and gas leakage test.
  - 2) Watch out for the following:
    - a) Is the electric plug firmly inserted into the socket.
    - b) Is there any abnormal sound from the unit.
    - c) Is there any abnormal vibration with regard to the unit itself or piping.
    - d) Is there smooth drainage of water.
- Check that:
  - 1) Condenser fan is running, with warm air blowing off the condensing unit.
  - 2) Evaporator blower is running and discharge cool air.
  - 3) The remote control incorporate a 3 minute delay in the circuit. Thus, it requires about 3 minutes before the outdoor condensing unit can start up.

## Standard Operation Conditions

### Cooling Only

TEMPERATURE	Ts°C	Th°C
MINIMUM INDOOR TEMPERATURE	19.4	13.9
MAXIMUM INDOOR TEMPERATURE	26.7	19.4
MINIMUM OUTDOOR TEMPERATURE	19.4	13.9
MAXIMUM OUTDOOR TEMPERATURE	46.0	24.0

### Heat Pump

TEMPERATURE	Ts°C	Th°C
MINIMUM INDOOR TEMPERATURE	15.0	-
MAXIMUM INDOOR TEMPERATURE	26.7	-
MINIMUM OUTDOOR TEMPERATURE	- 8.0	- 9.0
MAXIMUM OUTDOOR TEMPERATURE	24.0	18.0

Ts : Dry bulb temperature  
Th : Wet bulb temperature

# Remote Control Operation Guide

## G6 Remote Controller

7

### FAN SPEED AND VENTILATION MODE SELECTION

Press the button until the desired fan speed is achieved.

### SIGNAL TRANSMISSION INDICATION

- Blink to confirm the last setting has been send to the unit.

2

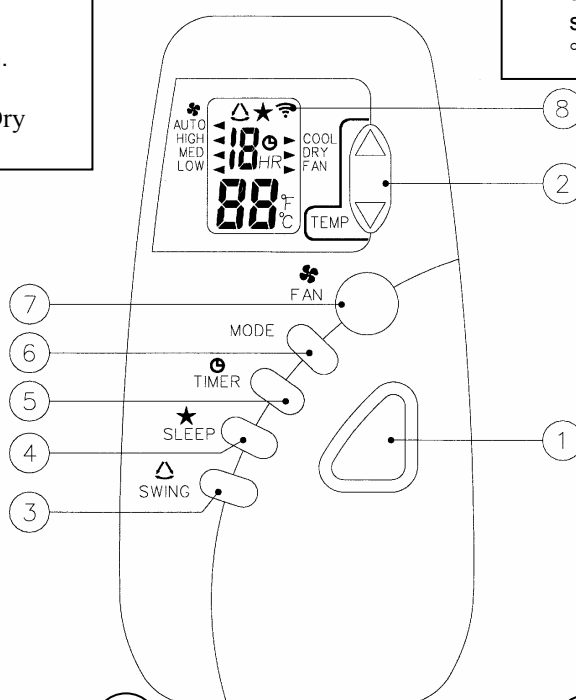
### TEMPERATURE SETTING

- Set the desire room temperature.
- Press button to increase or decrease the set temperature. Setting range are between 16°C to 30°C setting (60°F to 80°F)(Optional setting from 20°C to 30°C).
- Press  $\Delta$  or  $\nabla$  button simultaneously will toggle the temperature setting between °C and °F.

6

### OPERATION MODES

- Press the "mode" button for select the type of operating mode.
- Cooling only unit:  
Cool → Dry → Fan.
- Heatpump unit :  
Auto → Cool → Dry



5

### TIMER SETTING

- Press set button to activate the timer setting (from 1 hour to 15 hour) of the air conditioning unit. It will be in "On" or "Off" condition after the set time depending to the current condition (either from "On" to Off" or vise versa)
- To cancel the timer setting, press the button continuously until the timer display goes off.

4

### SLEEP MODE

- Press the button to activate sleep mode. This mode can only be activated while in cooling or heating mode operation. If it is activated in "COOL" mode, the set temperature will be increase 0.5°C after 30 minutes, 1°C after 1 hour and 2°C after 2 hours. Whereas in "HEAT" mode, the set temperature will decrease by 1°C after 30mins, 2°C after 1 hour and 3°C after 2 hours.
- This function is available under COOL, HEAT & AUTO mode.

1

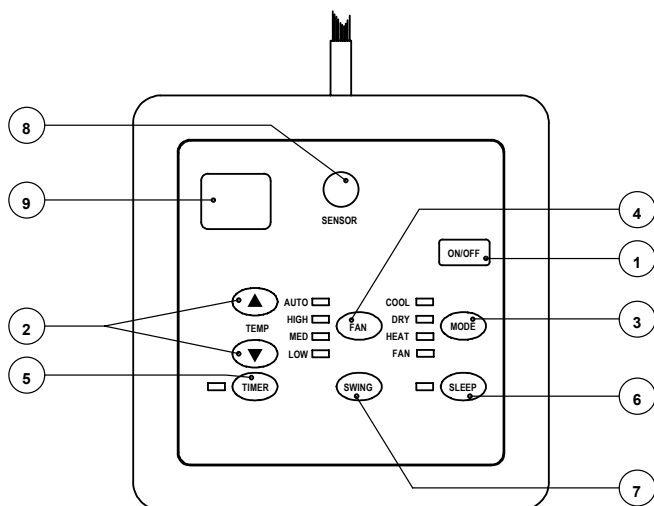
### ON / OFF switch

- Press to start the air conditioner unit.
- Press again to stop the unit.

3

### AUTOMATIC AIR SWING

- Press the button to activate the automatic air swing function. The swing angle ranging from horizontal to 25° to bottom.



### **SLM**

#### **1. “ON/OFF” switch**

- Press to start the air conditioner unit.
- Press again to stop the unit.

#### **2. Temperature setting**

- Set the desired room temperature.
- Press button to increase or decrease the set temperature. Setting range are between 16°C to 30°C (60°F to 80°F).

#### **3. Operation Modes**

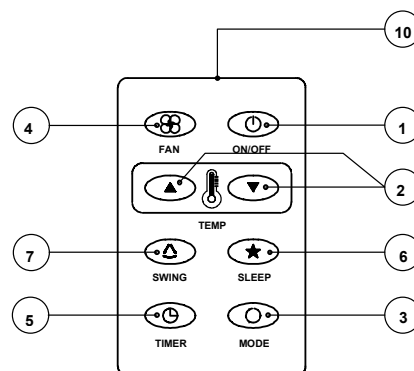
- Press the “mode” button for select the type of operating mode.
  - Cooling Only :  
COOL, DRY, FAN
  - Heat Pump :  
AUTO, COOL, DRY, HEAT, FAN  
(AUTO mode is represented by both COOL and HEAT LED light on)

#### **4. Fan Speed selection.**

- Press the button until the desired fan speed is achieved.

#### **5. Timer.**

- Press the set button to select the switch timer of the air conditioner unit (the setting range is between 1 to 10 hours).



### **AC-5300 (Optional)**

#### **6. “Sleep” mode**

- Press button to activate the sleep function. This function can only be activated under “cool” or heating mode operation. When it is activated under “cool” mode operation, the set temperature will increase 0.5°C after 30 minutes, 1°C after 1 hour and 2°C after 2 hours. If it is activated under “HEAT” mode operation, the set temperature will be decreased 0.5° C after 30 minutes, 1° C after 1 hour and 2° C after 2 hours.

#### **7. Air Swing**

- Press button to activate the automatic air swing function.

#### **8. Sensor**

- Infra red sensor to receive signals from wireless controller.

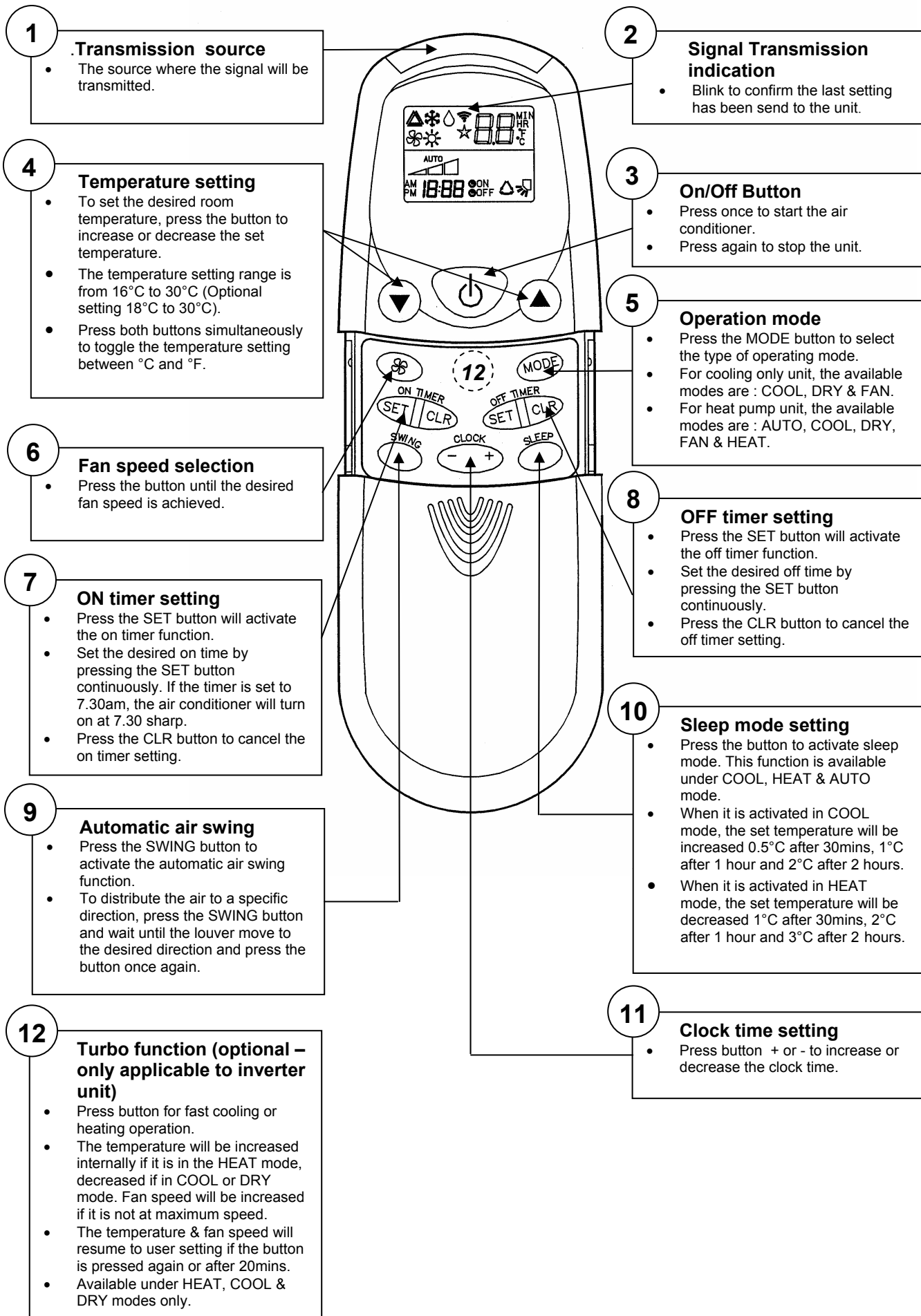
#### **9. LED display**

- To display the set temperature (in ° C) and timer delay setting (in hours).

#### **10. Transmission source**

- To transmit signals to the air conditioner.

## G7 Remote Controller



# Servicing and Maintenance



**Warning: Disconnect from main supply before servicing the air conditioner.**

The unit is designed to give long life operation with minimum maintenance required. However, it should be regularly checked and the following items should be given due attention.

Components	Maintenance Procedure	Recommended Schedule
Air filter (Indoor Unit)	<ol style="list-style-type: none"> <li>1. Remove the ionizer filter before cleaning the filter.</li> <li>2. Remove the dust adhering on the filter by using a vacuum cleaner or wash using water less than 40°C with a neutral cleaning detergent.</li> <li>3. Rinse and dry it before fitting back the ionizer filter and set it back to unit.</li> <li>4. <b>Note : Never use petrol, thinner, benzene or any other chemicals.</b></li> </ol>	At least once a month.
Indoor unit	<ol style="list-style-type: none"> <li>1. Clean away dirt or dust on grille or panel by wiping with a soft cloth soaked in lukewarm (or cool) water or neutral detergent solution.</li> <li>2. <b>Note : Never use petrol, thinner, benzene or other volatile chemicals, which may cause plastic surface to deform.</b></li> </ol>	At least once a month.
Condense Drain Pan & Pipe	<ol style="list-style-type: none"> <li>1. Check the cleanliness and clean it if necessary.</li> <li>2. Check the condensate water flow</li> </ol>	Every 3 months.
Indoor Fan	Check if there is any abnormal noise.	If necessary
Indoor/Outdoor Coil	<ol style="list-style-type: none"> <li>1. Check and remove the dirt between the fins.</li> <li>2. Check and remove any obstacles which hinder air flow through the indoor or outdoor.</li> </ol>	Every month.
Power Supply	<ol style="list-style-type: none"> <li>1. Check the running current and voltage for indoor and outdoor unit.</li> <li>2. Check the electrical wiring and tighten the wire onto the terminal block if necessary.</li> </ol>	Every 2 months Every year
Compressor	No maintenance needed if refrigerant circuit remains sealed. However, check for refrigerant leak at joint and fitting.	Every 6 months.
Compressor Oil	Oil is factory charged. Not necessary to add oil if circuit remains sealed.	No maintenance required.
Fan Motor Oil	All motors are pre-lubricated and sealed at factory.	No maintenance required.

# Pre Start up Maintenance

## After Extended Shutdown

- Inspect thoroughly and clean indoor and outdoor units.
- Clean or replace air filter.
- Clean condense drain line.
- Clean clogged indoor and outdoor coils.
- Check fan imbalance before operation.
- Tighten all wire connections.
- Check for refrigerant leakage,

**Note:** The crankcase heater should be energized for at least 6 hours before start of operation (after extended shutdown).

## Troubleshooting

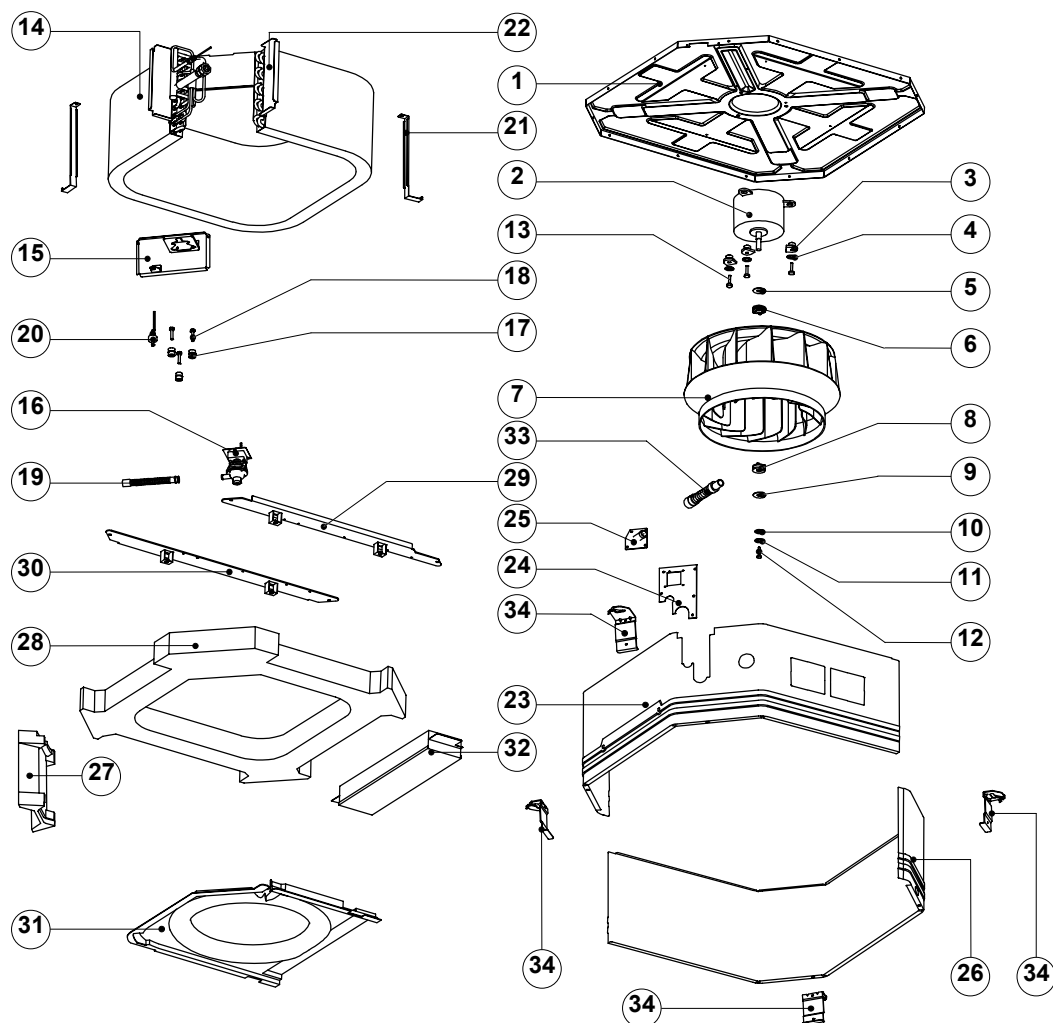
When any air conditioner malfunction is noted, immediately switch off the power supply to the unit, and contact the local dealer, if necessary. Some simple trouble shooting tips are given below:

Fault	Cause
1. Compressor does not work 3 minutes after starting.	<ul style="list-style-type: none"><li>• Protection against frequent starting. Wait for 3 to 4 minutes.</li></ul>
2. The unit does not work.	<ul style="list-style-type: none"><li>• Power failure or need to replace the fuse.</li><li>• The power plug is disconnected.</li><li>• It is possible that your delay timer has been set incorrectly.</li><li>• If the fault persist after the verifications, contact your installer.</li></ul>
3. The air flow is too low.	<ul style="list-style-type: none"><li>• The air filter is dirty.</li><li>• The door and windows are opened.</li><li>• The suction and discharge are clogged.</li></ul>
4. The remote control light is dim.	<ul style="list-style-type: none"><li>• Battery flat.</li><li>• Batteries are incorrectly inserted or misplaced.</li></ul>
5. Air discharge has bad odor.	<ul style="list-style-type: none"><li>• Odors may be caused by cigarette, smoke particles, perfume etc.. which adhere to the coil.</li></ul>
6. Condensation on the front panel	<ul style="list-style-type: none"><li>• This is due to air humidity after a long time operation.</li><li>• The set temperature is too low, increase the temperature and change it to high fan.</li></ul>
7. Hissing sound during operation	<ul style="list-style-type: none"><li>• Refrigerant flow into evaporator coil.</li></ul>

**If the fault persist, call your local dealer.**

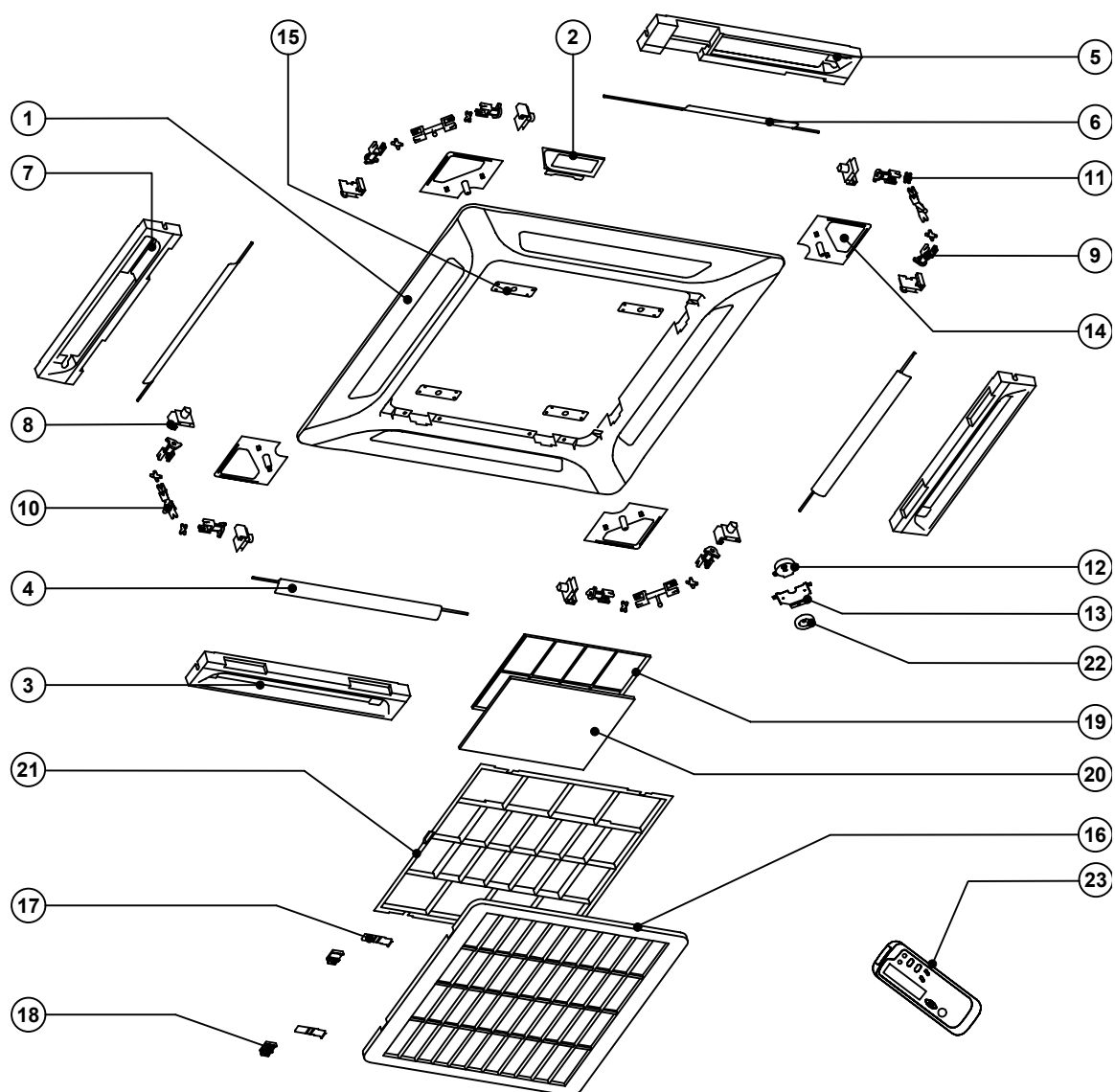
# Parts List

Unit – MCK – A/AR



NO.	PARTS DESCRIPTION	NO.	PARTS DESCRIPTION
1	BASE PAN	18	HEXAGON BOLT
2	FAN MOTOR	19	DRAIN HOSE
3	FAN MOTOR BUSH	20	LEVEL SWITCH
4	PLAIN WASHER	21	COIL SUPPORT
5	FAN MOTOR WASHER	22	PARTITION
6	BOTTOM COUPLING	23	SIDE PANEL FRONT
7	TURBO FAN	24	VALVE PLATE
8	TOP COUPLING	25	DRAIN CONNECTOR
9	FLAT WASHER	26	SIDE PANEL BACK
10	PLAIN WASHER	27	AIR GUIDE
11	SPRING WASHER	28	DRAIN PAN
12	HEXAGON BOLT	29	FIX BRACKET FRONT
13	HEXAGON BOLT	30	FIX BRACKET BACK
14	EVAPORATOR COIL	31	FAN COVER
15	DRAIN PUMP BRACKET	32	TERMINAL BOX
16	DRAIN PUMP	33	DRAIN PIPE
17	DRAIN PUMP BUSH	34	HANGER BRACKET A, B & C

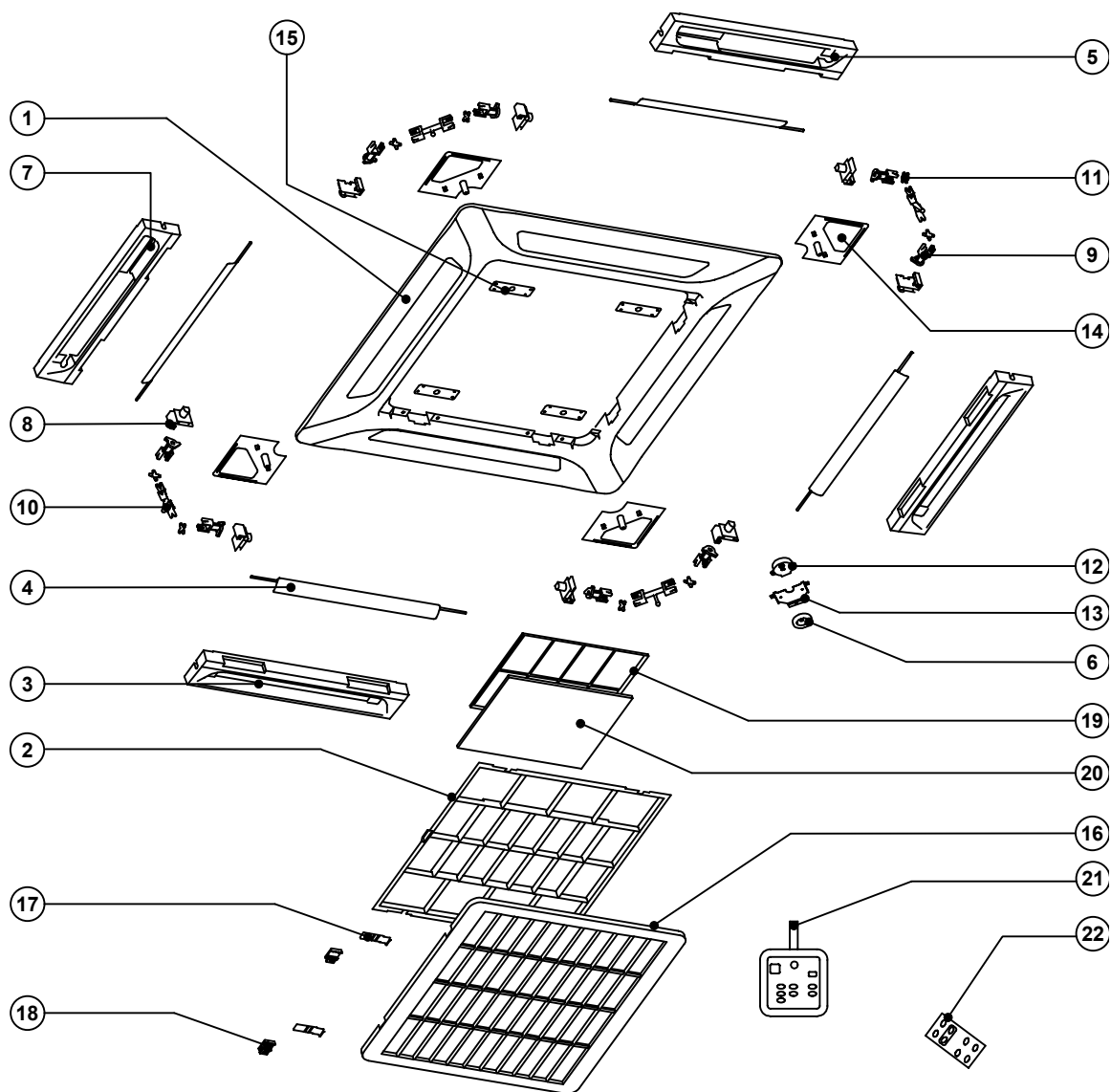
## Panel ( Wireless Remote Control ) - MCK – A/AR



NO.	PART DESCRIPTION	NO.	PART DESCRIPTION
1	FRONT PANEL	13	SWING MOTOR BRACKET
2	RECEIVER BRACKET	14	PANEL COVER
3	DISCHARGE HOUSING A	15	FIX PLATE
4	METAL LOUVER A	16	AIR INTAKE GRILLE
5	DISCHARGE HOUSING B	17	GRILLE LOCK
6	METAL LOUVER B	18	GRILLE LOCK BRACKET
7	DISCHARGE HOUSING D	19	IONIZER FILTER FRAME
8	LOUVER BRACKET	20	IONIZER FILTER
9	CRANK SHAFT	21	AIR FILTER
10	CRANK CONNECTOR	22	AIR SWING CAP
11	CRANK CROSS	23	REMOTE CONTROL
12	SWING MOTOR		

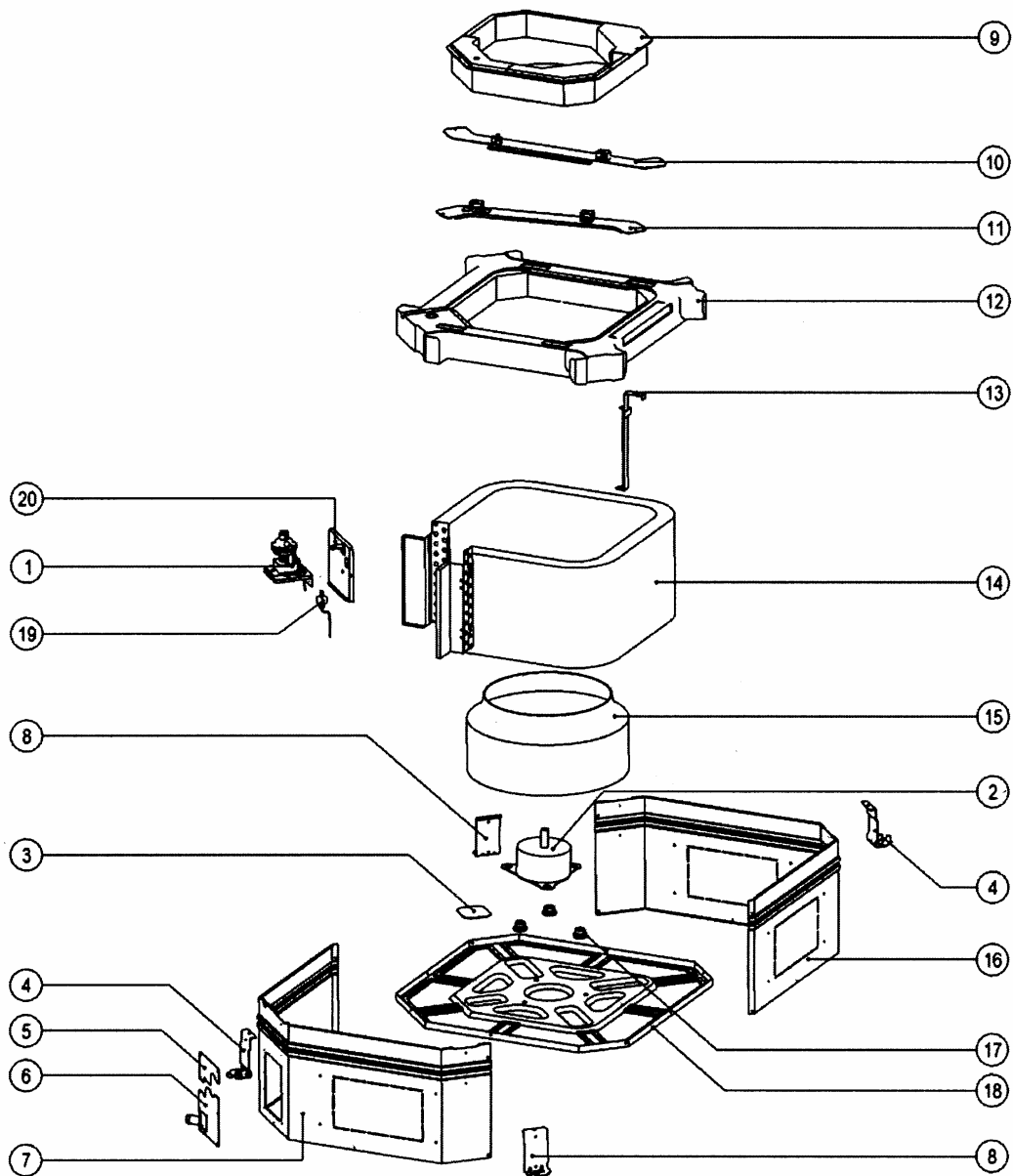


## Panel (Wired Remote Control) - MCK – A/AR



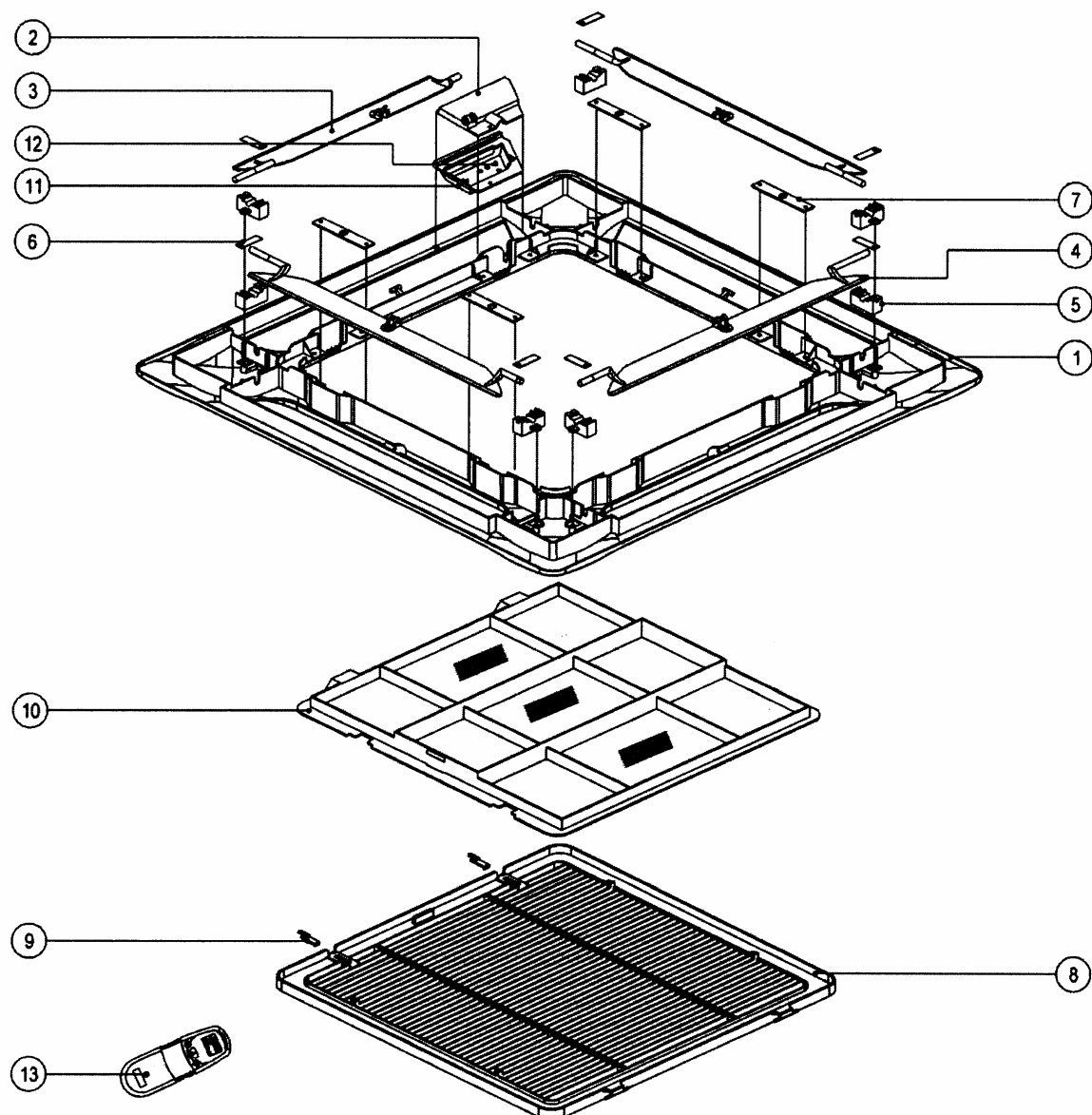
NO	PART DESCRIPTION	NO.	PART DESCRIPTION
1	FRONT PANEL	12	SWING MOTOR
2	AIR FILTER	13	SWING MOTOR BRACKET
3	DISCHARGE HOUSING A	14	PANEL COVER
4	METAL LOUVER A	15	FIX PLATE
5	DISCHARGE HOUSING C	16	AIR INTAKE GRILLE
6	AIR SWING CAP	17	GRILLE LOCK
7	DISCHARGE HOUSING D	18	GRILLE LOCK BRACKET
8	LOUVER BRACKET	19	IONIZER FILTER FRAME
9	CRANK SHAFT	20	IONIZER FILTER
10	CRANK CONNECTOR	21	REMOTE CONTROL
11	CRANK CROSS	22	CARD REMOTE CONTROL

## Unit - MCK – B/BR



NO	PART DESCRIPTION	NO.	PART DESCRIPTION
1	DRAIN PUMP	11	HOLDER GRILLE SHORT
2	FAN MOTOR	12	DRAIN PAN
3	PLATE, WIRE	13	COIL HOLDER
4	HANGER BRACKET A	14	COIL ASSY
5	ASSY, VALVE PLATE BOTTOM	15	TURBO FAN
6	ASSY, VALVE PLATE TOP	16	ASSY PANEL A
7	ASSY PANEL B	17	BUSH, FAN MOTOR
8	HANGER BRACKET B	18	BASE PAN
9	CONTROL BOX ASSY	19	FLOAT SWITCH
10	HOLDER GRILLE LONG	20	DRAIN PUMP SUPPORT PLATE

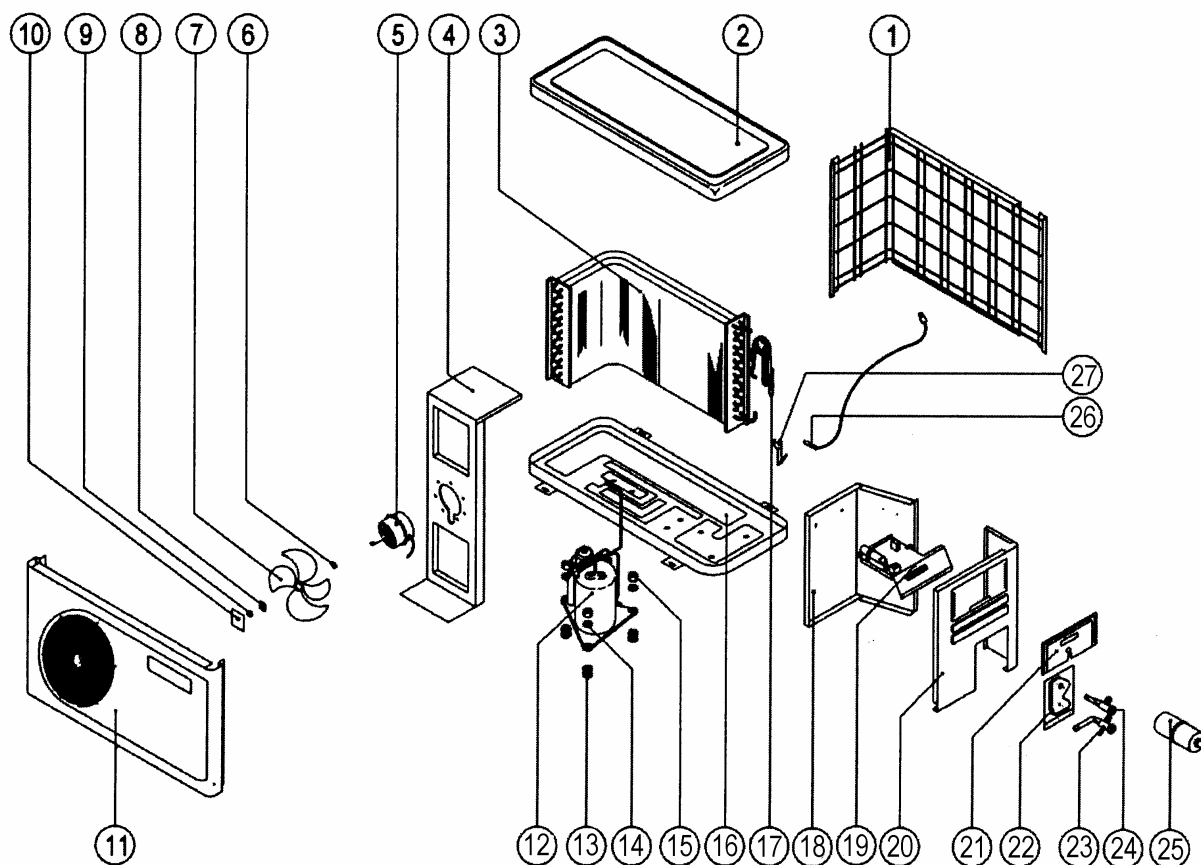
## Panel - MCK – B/BR



NO	PART DESCRIPTION	NO.	PART DESCRIPTION
1	FRAME	8	INTAKE GRILLE
2	RECEIVER BRACKET	9	GRILLE LOCK
3	LOUVER, SHORT	10	FILTER NET
4	LOUVER	11	RECEIVER COVER
5	LOUVER HOLDER	12	LED DISPLAY BOARD
6	LOUVER CLIP	13	LCD HANDSET
7	PLATE, FIX		

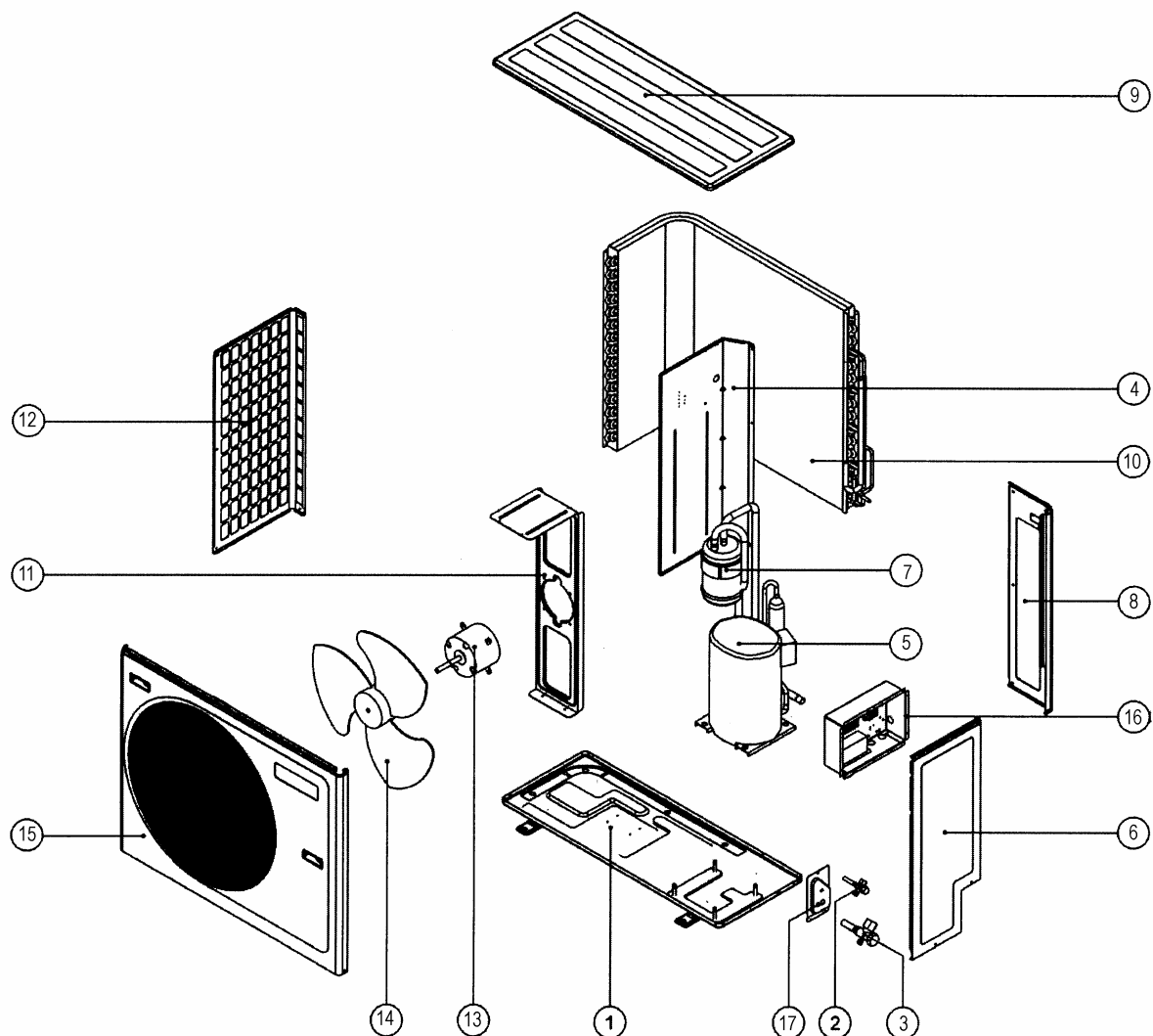
Model : MLC/ M4LC020/ 025B/BR

MLC030B/BR



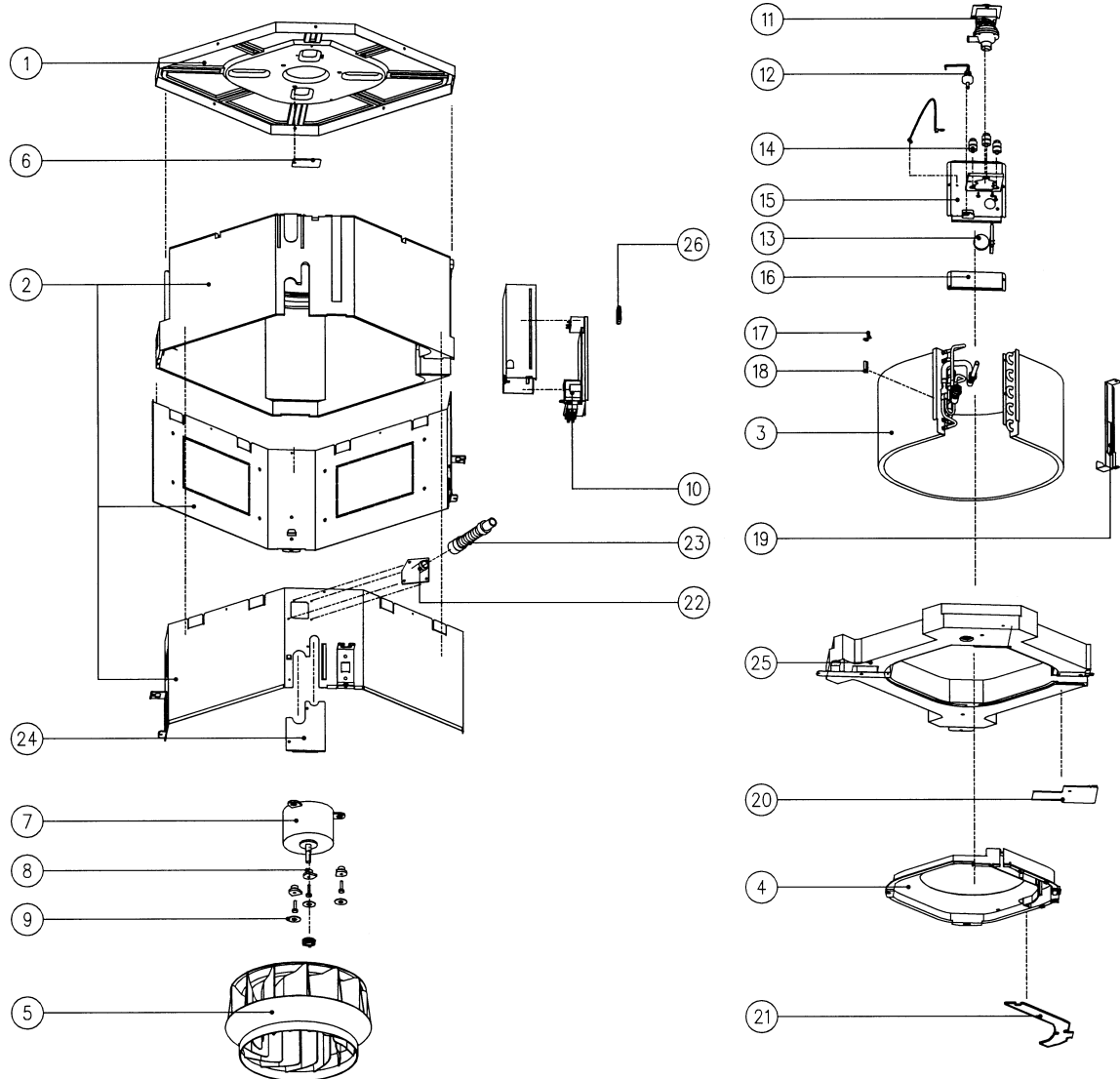
NO	PART DESCRIPTION	NO.	PART DESCRIPTION
1	BACK PANEL	15	NUT
2	TOP PANEL	16	BASE PAN
3	COIL ASSY	17	CAPILLARY TUBE
4	MOTOR MOUNTING BRACKET	18	PARTITION
5	FAN MOTOR	19	TERMINAL BOX PANEL
6	RING WASHER	20	SIDE PANEL
7	FAN BLADE	21	ACCESS PANEL
8	SQUARE WASHER	22	PLATE, FLARE VALVE
9	HEX NUT	23	FLARE VALVE
10	BLACK LABEL	24	FLARE VALVE
11	FRONT PANEL	25	COMPRESSOR CAPACITOR
12	COMPRESSOR	26	OUTDOOR THERMISTER (COPPER)
13	RUBBER GROMMET	27	THERMISTER CLIP
14	WASHER		

**Model : MLC/ M4LC030/ 040/ 050/ 061 C/CR, M4LC060C  
MLC035C/CR**



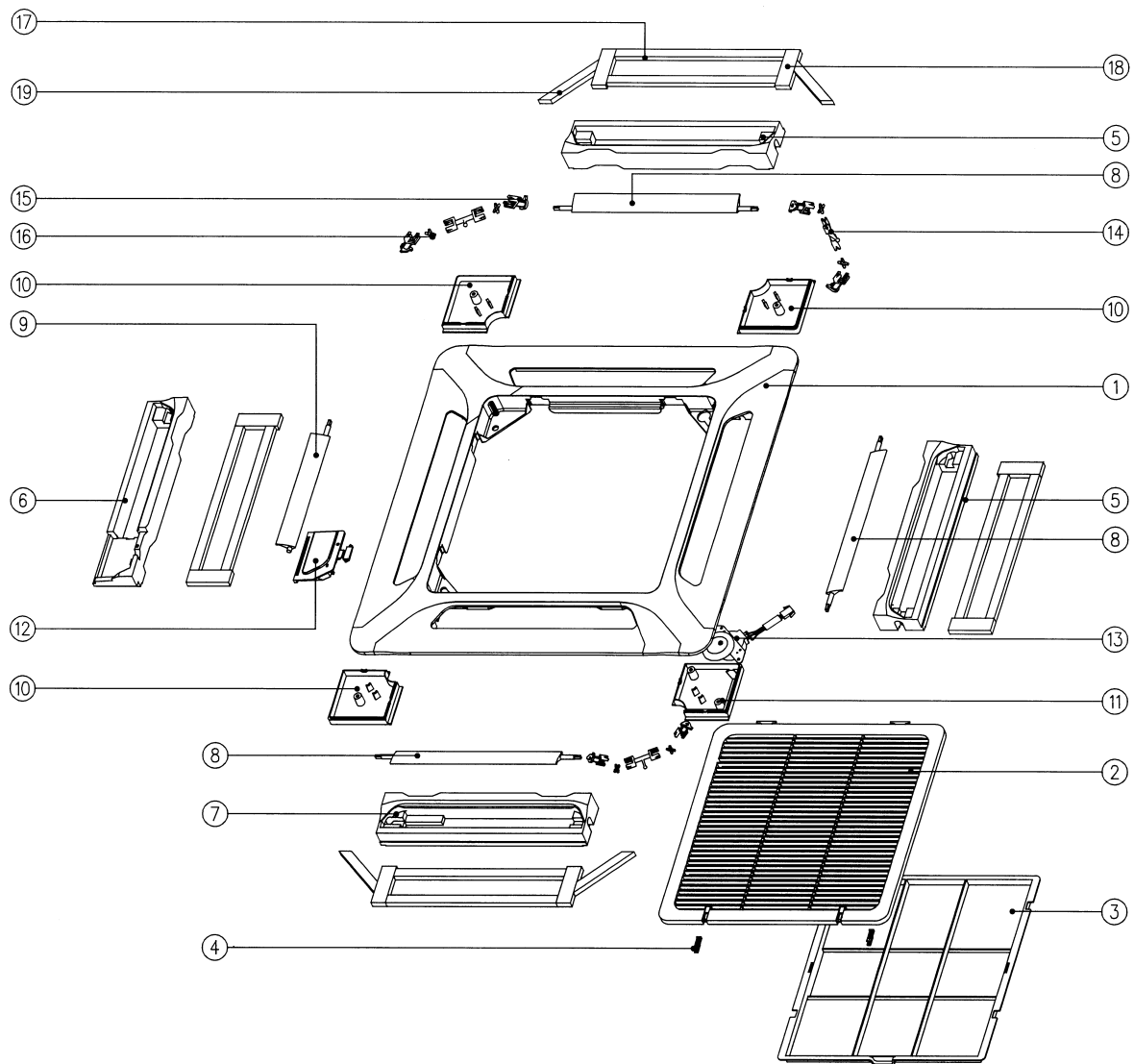
NO	PART DESCRIPTION	NO.	PART DESCRIPTION
1	BASE PAN	11	MOTOR BRACKET ASSY
2	FLARE VALVE	12	SIDE PANEL LEFT
3	FLARE VALVE	13	FAN MOTOR
4	PARTITION	14	FAN BLADE
5	COMPRESSOR	15	FRONT PANEL ASSY
6	ACCESS PANEL	16	TERMINAL BOX ASSY
7	ACCUMULATOR	17	PLATE, FLARE VALVE
8	BACK PANEL		
9	TOP PANEL		
10	COIL ASSY		

**Model : MCK010C/CR**  
**MCK015C/CR**  
**MCK020C/CR**



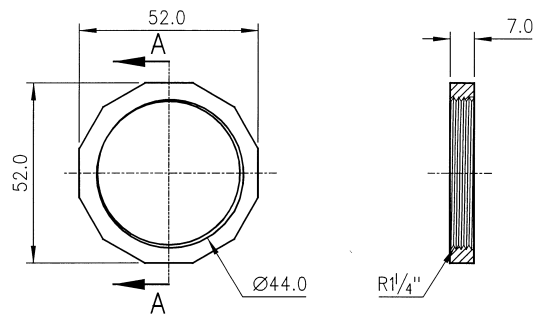
NO.	PART DESCRIPTION	NO	PART DESCRIPTION
1	ASSY. BASE	14	BUSH, DRAIN PUMP
2	ASSY. CASING	15	ASSY. DRAIN PUMP SUPPORT BUCKET
3	ASSY. COIL	16	ASSY., ENDPLATE SUPPORT
4	COVER, FAN	17	CLIP, COIL SENSOR (6mm)
5	BLOWER WHEEL, TURBO FAN FX330 TU YAMAHA	18	TUBE, COIL SENSOR
6	PLATE, WIRE	19	BRACKET, COIL
7	MOTOR, ACK20C-501 HONG LU	20	COVER, TERMINAL
8	BUSH, FAN MOTOR	21	COVER, WIRE
9	BUSH, FAN MOTOR RING	22	CONNECTOR, DRAIN CK
10	ASSY. , CONTROL BOX	23	HOSE, DRAIN CK
11	DRAIN PUMP PJV-0732	24	ASSY., COVER VALVE
12	LEVEL SWITCH/ FLOAT SWITCH FS-06122A	25	ASSY., DRAIN PAN
13	BUSH, WIRE NRID22XOD 36xT10.0 – MODEL CE/SB	26	BUSH, WIRE

**Panel : MCK010/ 015/ 020C/CR**

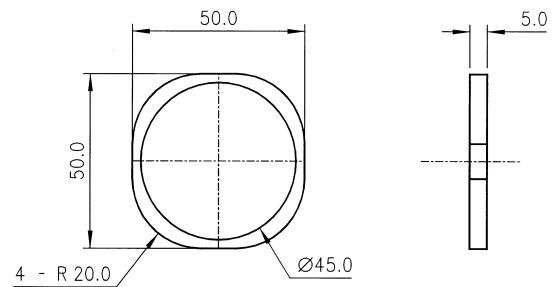


NO.	PART DESCRIPTION	NO.	PART DESCRIPTION
1	FRAME	11	LINKAGE, COVER MOTOR
2	INTAKE GRILLE	12	ASSY, BRACKET RECEIVER (LED/SLM)
3	FILTER	13	AIR SWING MOTOR ASSY
4	GRILLE LOCK	14	CRANK CONNECTOR
5	DISCHARGE, FOAM	15	LOUVER HOLDER
6	DISCHARGE, FOAM LED	16	CRANK CROSS
7	DISCHARGE, FOAM SHORT	17	INSULATION LONG
8	LOUVER	18	INSULATION SHORT
9	LED LOUVER	19	INSULATION CORNER
10	LINKAGE, COVER		

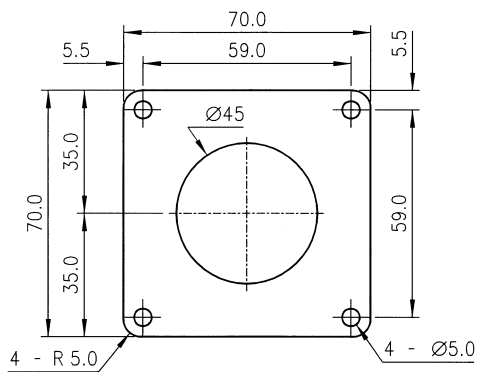
## Fresh Air Kit for MCK-C Models



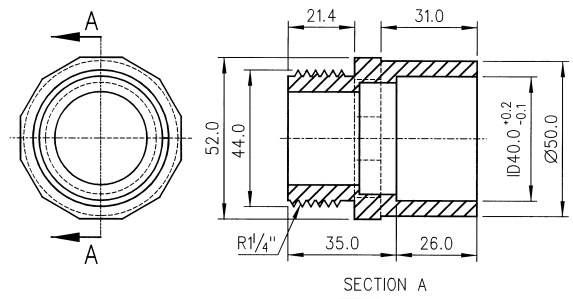
RING  
MATERIAL SIZE : t7.0 x 52.0 x 52.0  
MATERIAL SPEC : PVC



GASKET  
MATERIAL SIZE : t5.0 x 50.0 x 50.0  
MATERIAL SPEC : NR



PLATE, FRESH AIR KIT  
MATERIAL SIZE : t0.8 x 70.0 x 70.0  
MATERIAL SPEC : SGCC-Z



DOUBLE ADAPTOR SOCKET FEM/MALE  
MATERIAL SIZE : 50 x 40 x R1 1/4"  
MATERIAL SPEC : PVC  
10 02 4 028817



